

ATTACHMENT B

WEEKLY PROGRESS REPORTS TO DEQ



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www.integral-corp.com

July 15, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

**Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction
Progress Report (July 5 – 11, 2015)**

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from July 5 through July 11, 2015.

Actions Completed During the Reporting Period

Project Area Surveying

The surveying contractor set benchmarks defining the limits of the project action area.

Erosion and Sediment Control

Erosion and sediment control was placed downgradient and riverward of construction activities.

Berm Clearing

The construction contractor, Strider Construction Company (Strider) began activities to remove trees from the berm on July 7, 2015. This work included removing trees with an excavator and/or chainsaw and moving to the woody debris stockpile area in material processing. For the period, trees were removed from the northern project area from approximately 5 +00 ft to 11 +50 ft.

Access Roadway

Construction of an access roadway was initiated from the mill road near 9 +00 ft to the upper beach.

Disposal Material Management Area

Additional construction of the Disposal Material Management Area (DMMA) was completed during the reporting period. This included placing an impermeable liner to cover the base and walls of the DMMA, and covering the liner with steel plates to protect the liner from punctures. Construction of the dump truck access ramp on the perimeter of the DMMA was initiated.

Import Material

Analyses of import materials are in process. Additional sampling and analysis of beach import material for arsenic is being completed.

Excavation, Disposal and Soil Management

No soil was excavated during the reporting period.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the July 5 – 11 reporting period. Traffic haul routes have changed slightly from the final design report. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
File C1144-640



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July 22, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

**Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction
Progress Report (July 12 – 18, 2015)**

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from July 12 through July 15, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Erosion and sediment controls (straw wattles) were placed along the entire length of the beach within the Project Area. Straw wattles were also placed along the mill roadway downgradient of the berm where soil was visible disturbed during tree and brush removal.

Berm Clearing and Excavation

The construction contractor, Strider Construction Company (Strider), continued activities to remove trees and vegetation from the berm. This work included removing trees with an excavator and/or chainsaw and hauling the material to the woody debris stockpile area in material processing scrap yard. For the period, the majority of the trees and vegetation were removed from the entire berm.

Access Roadways

Construction of an access roadway was initiated from the mill road south of the northern stormwater outfall to the upper beach. Access roadways were also constructed from the mill road to the upper beach on the north and south sides of the dock.

Quarry spall was placed on the access ramps for dust control and sediment fencing was placed downgradient of exposed slopes.

Disposal Material Management Area

Additional construction of the Disposal Material Management Area (DMMA) was completed during the reporting period. This included covering the liner with steel plates to protect the liner from punctures, and constructing a ramp for offloading excavated bank material into the DMMA.

Import Material

Analyses of import materials are in process.

Excavation, Disposal and Soil Management

Strider began removing berm soil starting on the south side of the dock and working north. The berm material was temporarily stockpiled on the north side of the east landfill.

No other soil was excavated during the reporting period.

Archaeological Monitoring

Willamette Cultural Resources completed training of Strider and Integral staff.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the July 12-18 reporting period. Traffic haul routes have changed slightly from the final design report. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
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July 29, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (July 19 – 25, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from July 19 - 25, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was installed by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil.

Berm Excavation

Berm material was removed south of the dock and in areas north of the dock. Material was staged near the east landfill. Some berm material was used to finish the beach access ramp on the north side of the dock.

Bank Excavation

Bank material was removed south of the dock and transported to the Disposal Material Management Area (DMMA). Stockpiled material was covered with plastic sheeting at the end of each work day.

Import Material

Analyses of import materials (berm backfill, beach backfill) are in process. Some rock armor was delivered to the site during the reporting period. Analyses of the 1.5-inch minus crush rock that will be used for bank reconstruction is complete.

Bank Sampling

Six of 10 subsamples were collected from the excavated bank face south of the dock for compositing. The remaining four subsamples will be collected when the southern access road is removed and the remaining section of bank face south of the dock is excavated. The composited sample will be analyzed for PCBs and metals to characterize soils that will remain in place under the armor cap.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the bank face. No turbidity was observed in the river resulting from construction activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the July 19-25 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
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August 4, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

**Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction
Progress Report (July 26 – August 1, 2015)**

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from July 26 through August 1, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was installed by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA).

Berm Excavation

The remainder of berm material was excavated and hauled to the north side of the east landfill for stockpiling.

Bank Excavation

Bank material was removed from several areas of the riverbank, including north and central portions of the project area. Soil was hauled via off road trucks to the DMMA for stockpiling. Stockpiled soil was loaded into haul trucks for transport and disposal at Riverbend Landfill in McMinnville, Oregon.

Import Material

Analyses of import materials (berm backfill, beach backfill) are in process. Class 2000 rock armor was delivered to the site during the reporting period.

Monitoring Well Decommissioning

Bank and beach monitoring wells were decommissioned via over-drilling during the reporting period. Bank wells MW-5, MW-7, MW-8, MW-9, MW-10 and MW-13, and beach wells MW-14, MW-15, MW-16, MW-17, MW-18, MW-19 and MW-23 were decommissioned by Holt Drilling.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the bank face. No turbidity was observed in the river resulting from construction activities.

Cultural Resource Monitoring

Willamette Cultural Resources Associates were on-site to conduct cultural resources monitoring during excavation near the north end of the project area. No cultural resources were discovered during excavation activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the July 26 through August 1, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting

Riverbank SCM Progress Report July 26 through August 1, 2015
August 4, 2015
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Linda Baker, Jane Sund – Integral Consulting
File C1144-640



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August 11, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (August 2 – August 9, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from August 2 through August 9, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was installed by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA).

Import Material

Analyses of import berm and beach backfill import materials were completed. Berm and beach material were subsequently approved for import by DEQ and EPA. Class 2000 rock armor and 1.5-in. minus crushed rock were delivered to the site during the reporting period.

Bank Excavation and Stabilization

Bank material was removed from several areas of the riverbank, including north and central portions of the project area. Soil was hauled via off road trucks to the DMMA for stockpiling. Stockpiled soil was loaded into haul trucks for transport and disposal at Riverbend Landfill in McMinnville, Oregon.

With the exception of excavation beneath the construction access road, excavation of toe material near the north end of the project area was completed between stations 2+50 ft and 5+00 ft. Material was hauled to the north side of the east landfill for stockpiling.

Geotextile fabric was placed over toe and bank excavation between stations 2+50 ft and 5+00 ft. Crushed rock was placed on the geotextile, followed by placement Class 2000 rock armor.

Mold Basement

Large concrete debris was removed from the riverbank area south of Northern Outfall (003) and placed in the mold basement.

Post-excavation Sampling

In accordance with the October 2014 soil sampling plan, 10-point composite samples BF-1 and BF-2 were collected from bank face surfaces excavated to finish grade. Samples were shipped under chain-of-custody to ALS Laboratory in Kelso, Washington for polychlorinated biphenyl Aroclors and total metals analysis.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the bank face. No turbidity was observed in the river resulting from construction activities.

Cultural Resource Monitoring

Willamette Cultural Resources Associates were on-site to conduct cultural resources monitoring during excavation near the north end of the project area. No cultural resources were discovered during excavation activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the August 2 through August 9, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
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August 18, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

**Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction
Progress Report (August 10 – 16, 2015)**

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from August 10 through August 16, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was installed by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA).

Import Material

Class 2000 rock armor and beach backfill were delivered to the site during the reporting period. Analysis of topsoil material is in process.

Excavation, Stabilization and Soil Management

Bank soil was excavated from station 10+00 ft to station 11+25 ft. Soil was hauled via off road trucks to the DMMA for stockpiling. Stockpiled soil was loaded into haul trucks for transport and disposal at Riverbend Landfill in McMinnville, Oregon.

Excavation of trench toe material near the north end of the project area was completed between stations 5+00 ft to 8+00 ft. Excavated material between 5+00 ft and 6+25 ft was hauled to the north side of the east landfill for stockpiling. Excavated material between 6+25 ft and 8+00 ft was hauled to the mold basement.

Geotextile fabric was placed over toe and bank excavation between stations 5+00 ft and 8+00 ft. Crushed rock was placed on the geotextile, followed by placement Class 2000 rock armor.

Stockpiled tree stumps were loaded into haul trucks and transported to Hillsboro Landfill in Hillsboro, Oregon for disposal.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the toe trench and bank face. No turbidity was observed in the river resulting from construction activities.

Cultural Resource Monitoring

Willamette Cultural Resources Associates were on-site to conduct cultural resources monitoring during excavation near the north end of the project area. No cultural resources were discovered during excavation activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the August 10 through August 16, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS

Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
File C1144-640



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August 26, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (August 17 – 23, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from August 17 through August 23, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was installed by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA). Sediment fencing was installed daily below the excavation area at an approximate elevation of 9.6 ft NGVD29.

Import Material

Class 2000 rock armor and beach backfill were delivered to the site during the reporting period. Analytical data for topsoil material has been received and is undergoing review.

Excavation, Stabilization and Soil Management

Bank soil was excavated around the Central (001) stormwater pump station from station 11+25 ft to station 12+00 ft. Soil was hauled via off road trucks to the DMMA for stockpiling.

Excavation of trench toe material was completed from 8+00 ft to 11+00 ft and from 12+00 ft to 14+00 ft. Excavated material between 9+50 ft and 10+50 ft was hauled to the north side of the east landfill for stockpiling. Excavated material from 8+00 ft to 9+50 ft, 10+50 ft to 11+00 ft, and 12+00 ft to 14+00 ft was hauled to the mold basement.

Geotextile fabric was placed over toe and bank excavation, crushed rock was placed on the geotextile, and Class 2000 rock armor was placed on the crushed rock from 8+00 ft to 11+00 ft and from 12+00 ft to 14+00 ft.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the toe trench and bank face. No turbidity was observed in the river resulting from construction activities.

Cultural Resource Monitoring

Willamette Cultural Resources Associates were on-site to conduct cultural resources monitoring during excavation near the north end of the project area. No cultural resources were discovered during excavation activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the August 17 through August 23, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting



319 SW Washington Street
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September 1, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

**Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction
Progress Report (August 24 – 30, 2015)**

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from August 24 through August 30, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was installed by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA). Sediment fencing was installed daily below the excavation area at an approximate elevation of 9.6 ft NGVD29.

Import Material

Class 2000 rock armor and beach backfill were delivered to the site during the reporting period. Analytical data for topsoil material has been submitted to DEQ for review. DEQ has approved the use of this material. Additional silty material that will be blended with the topsoil is being sampled for chemical analysis. Upon receipt, results will be submitted to DEQ for review.

Excavation, Stabilization and Soil Management

Excavation of trench toe material was completed from 11+00 ft to 12+00 ft. Excavated material was hauled to the mold basement. Geotextile fabric was placed over toe and bank excavation, crushed rock was placed on the geotextile, and Class 2000 rock armor was placed on the crushed rock from 11+00 ft to 12+00 ft.

Excavation of upper beach material was completed from 3+00 ft to 3+50 ft and from 7+40 ft to 14+00 ft. Material from 3+00 ft to 3+50 ft, from 9+50 ft to 10+50 ft, and from 11+40 ft to 12+40 ft was hauled to the north side of the east landfill. The majority of this material from 7+40 ft to 9+50 ft, from 10+50 ft to 11+40 ft, and from 12+40 ft to 14+00 ft was hauled to the mold basement, with the exception of approximately 30 cubic yards, as noted below.

A slight petroleum-like odor was observed during excavation near station 7+50 ft. No visual soil staining was observed. This material was segregated and stockpiled in the DMMA. A five-point composite sample was collected from the stockpile and submitted to ALS Laboratory (ALS) in Kelso, Washington for total petroleum hydrocarbon analysis with silica gel cleanup. Results were non-detect for diesel-range organics and residual-range organics (the laboratory report is attached). This material will be placed in the mold basement.

Excavated sections were backfilled the same day with imported beach backfill material.

Post-excavation Sampling

In accordance with the final design report, a three-point composite sample was collected from the floor of the 3 ft upper beach excavation between stations 8+25 ft and 9+00 ft. The sample was shipped under chain-of-custody to ALS for polychlorinated biphenyl Aroclors analysis.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the toe trench and upper beach. No turbidity was observed in the river resulting from construction activities.

Cultural Resource Monitoring

Willamette Cultural Resources Associates were on-site to conduct cultural resources monitoring during excavation near the north end of the project area. No cultural resources were discovered during excavation activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

Following approval from DEQ, one minor change occurred during the August 24 - 30 reporting period. Due to space constraints in the mold basement, upper beach material between stations 11+40 ft and 12+40 ft, originally planned for placement in the mold basement, was hauled to the north side of the east landfill. As agreed upon with DEQ, this material will be buried beneath berm backfill material and other beach material previously-approved for placement on the north side of the east landfill.

There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

enclosures

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
File C1144-640

ATTACHMENT A

LABORATORY REPORT



ALS Environmental
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September 01, 2015

Analytical Report for Service Request No: K1509353

Craig Heimbucher
Integral Consulting, Inc.
319 SW Washington St.
Suite 1150
Portland, OR 97204

RE: Evraz Riverbank SCM

Dear Craig,

Enclosed are the results of the sample(s) submitted to our laboratory August 26, 2015
For your reference, these analyses have been assigned our service request number **K1509353**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Gregory Salata, Ph.D.
Client Services
Manager



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Table of Contents

Acronyms

Qualifiers

State Certifications, Accreditations, And Licenses

Case Narrative

Chain of Custody

Total Solids

Diesel and Residual Range Organics-Silica Gel Treated

Raw Data

Total Solids

Diesel and Residual Range Organics-Silica Gel Treated

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjllabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil

Service Request No.: K1509353
Date Received: 08/26/15

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

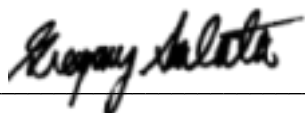
Sample Receipt

One soil sample was received for analysis at ALS Environmental on 08/26/15. The sample was received in good condition and consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Diesel Range Organics by Method NWTPH-Dx

No anomalies associated with the analysis of this sample were observed.

Approved by _____





Chain of Custody

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www.alsglobal.com

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PC Yug

Cooler Receipt and Preservation Form

Client / Project: Integral Service Request K15 09353
Received: 8/26/15 Opened: 8/26/15 By: KD Unloaded: 8/26/15 By: KD

1. Samples were received via? Mail Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1, Front 1, Back
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
<u>-5</u>	<u>-3</u>	<u>16</u>	<u>18</u>	<u>+2</u>	<u>358</u>	<u>NA</u>		<u>NA</u>	

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: RUSH



Total Solids

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil
Analysis Method: 160.3 Modified
Prep Method: None

Service Request: K1509353
Date Collected: 08/25/15
Date Received: 08/26/15
Units: Percent
Basis: As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
Soil-7+50	K1509353-001	87.2	-	1	08/27/15 17:02	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project Evraz Riverbank SCM
Sample Matrix: Soil

Service Request: K1509353**Date Collected:** 08/25/15**Date Received:** 08/26/15**Date Analyzed:** 08/27/15

Replicate Sample Summary
General Chemistry Parameters

Sample Name: Soil-7+50
Lab Code: K1509353-001

Units: Percent**Basis:** As Received

				Duplicate Sample K1509353- 001DUP			
Analyte Name	Analysis Method	MRL	Sample Result	Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	87.2	87.1	87.2	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Diesel and Residual Range Organics- Silica Gel Treated

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM

Service Request: K1509353

Cover Page - Organic Analysis Data Package
Diesel and Residual Range Organics - Silica Gel Treated

Sample Name	Lab Code	Date Collected	Date Received
Soil-7+50	K1509353-001	08/25/2015	08/26/2015
Soil-7+50	KWG1508111-1	08/25/2015	08/26/2015

Analytical Results

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil

Service Request: K1509353
Date Collected: 08/25/2015
Date Received: 08/26/2015

Diesel and Residual Range Organics - Silica Gel Treated

Sample Name: Soil-7+50
Lab Code: K1509353-001
Extraction Method: EPA 3550B
Analysis Method: NWTPH-Dx

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	29	1	08/27/15	08/28/15	KWG1508111	
Residual Range Organics (RRO)	ND	U	120	1	08/27/15	08/28/15	KWG1508111	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	89	50-150	08/28/15	Acceptable
n-Triacontane	88	50-150	08/28/15	Acceptable

Comments: _____

Analytical Results

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil

Service Request: K1509353
Date Collected: NA
Date Received: NA

Diesel and Residual Range Organics - Silica Gel Treated

Sample Name: Method Blank
Lab Code: KWG1508111-3
Extraction Method: EPA 3550B
Analysis Method: NWTPH-Dx

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	25	1	08/27/15	08/28/15	KWG1508111	
Residual Range Organics (RRO)	ND	U	99	1	08/27/15	08/28/15	KWG1508111	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	91	50-150	08/28/15	Acceptable
n-Triacontane	90	50-150	08/28/15	Acceptable

Comments: _____

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil

Service Request: K1509353

Surrogate Recovery Summary
Diesel and Residual Range Organics - Silica Gel Treated

Extraction Method: EPA 3550B
Analysis Method: NWTPH-Dx

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>
Soil-7+50	K1509353-001	89	88
Soil-7+50DUP	KWG1508111-1	85	86
Method Blank	KWG1508111-3	91	90
Lab Control Sample	KWG1508111-2	97	94

Surrogate Recovery Control Limits (%)

Sur1 = o-Terphenyl	50-150
Sur2 = n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil

Service Request: K1509353
Date Extracted: 08/27/2015
Date Analyzed: 08/28/2015

Duplicate Sample Summary
Diesel and Residual Range Organics - Silica Gel Treated

Sample Name: Soil-7+50
Lab Code: K1509353-001
Extraction Method: EPA 3550B
Analysis Method: NWTPH-Dx

Units: mg/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG1508111

Analyte Name	MRL	Sample Result	Soil-7+50DUP KWG1508111-1 Duplicate Sample		Relative Percent Difference	RPD Limit
			Result	Average		
Diesel Range Organics (DRO)	29	ND	ND	ND	-	40
Residual Range Organics (RRO)	120	ND	ND	ND	-	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil

Service Request: K1509353
Date Extracted: 08/27/2015
Date Analyzed: 08/28/2015

Lab Control Spike Summary
Diesel and Residual Range Organics - Silica Gel Treated

Extraction Method: EPA 3550B
Analysis Method: NWTTPH-Dx

Units: mg/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG1508111

Lab Control Sample
 KWG1508111-2
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Diesel Range Organics (DRO)	244	267	91	42-134
Residual Range Organics (RRO)	137	133	102	48-141

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil

Service Request: K1509353
Date Extracted: 08/27/2015
Date Analyzed: 08/28/2015
Time Analyzed: 12:00

Method Blank Summary **Diesel and Residual Range Organics - Silica Gel Treated**

Sample Name:	Method Blank	Instrument ID:	GC21
Lab Code:	KWG1508111-3	File ID:	J:\GC21\DATA\082815F\0828F020.D
Extraction Method:	EPA 3550B	Level:	Low
Analysis Method:	NWTPH-Dx	Extraction Lot:	KWG1508111

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1508111-2	J:\GC21\DATA\082815F\0828F018.D	08/28/15	11:37
Soil-7+50	K1509353-001	J:\GC21\DATA\082815F\0828F022.D	08/28/15	12:22
Soil-7+50DUP	KWG1508111-1	J:\GC21\DATA\082815F\0828F024.D	08/28/15	12:44

QA/QC Report

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil

Service Request: K1509353
Date Extracted: 08/27/2015
Date Analyzed: 08/28/2015
Time Analyzed: 11:37

Lab Control Sample Summary
Diesel and Residual Range Organics - Silica Gel Treated

Sample Name: Lab Control Sample
Lab Code: KWG1508111-2
Extraction Method: EPA 3550B
Analysis Method: NWTPH-Dx

Instrument ID: GC21
File ID: J:\GC21\DATA\082815F\0828F018.D
Level: Low
Extraction Lot: KWG1508111

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1508111-3	J:\GC21\DATA\082815F\0828F020.D	08/28/15	12:00
Soil-7+50	K1509353-001	J:\GC21\DATA\082815F\0828F022.D	08/28/15	12:22
Soil-7+50DUP	KWG1508111-1	J:\GC21\DATA\082815F\0828F024.D	08/28/15	12:44

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM

Service Request: K1509353
Calibration Date: 04/15/2015

Initial Calibration Summary
Diesel and Residual Range Organics - Silica Gel Treated

Calibration ID: CAL13980
Instrument ID: GC21

Column: ZB-1

Level ID	File ID
A	J:\GC21\DATA\041515F\0415F016.D
B	J:\GC21\DATA\041515F\0415F018.D
C	J:\GC21\DATA\041515F\0415F020.D
D	J:\GC21\DATA\041515F\0415F022.D
E	J:\GC21\DATA\041515F\0415F024.D
F	J:\GC21\DATA\041515F\0415F026.D
G	J:\GC21\DATA\041515F\0415F028.D
H	J:\GC21\DATA\041515F\0415F030.D
I	J:\GC21\DATA\041515F\0415F054.D
J	J:\GC21\DATA\041515F\0415F056.D

Level ID	File ID
K	J:\GC21\DATA\041515F\0415F058.D
L	J:\GC21\DATA\041515F\0415F060.D
M	J:\GC21\DATA\041515F\0415F062.D
N	J:\GC21\DATA\042315F\0423F016.D
O	J:\GC21\DATA\042315F\0423F018.D
P	J:\GC21\DATA\042315F\0423F020.D
Q	J:\GC21\DATA\042315F\0423F022.D
R	J:\GC21\DATA\042315F\0423F024.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Diesel Range Organics (DRO)	A	20	1340	B	50	1200	C	200	1250	D	500	1160	E	2000	1130
	F	5000	1180	G	20000	1030	H	50000	1010						
Residual Range Organics (RRO)															
	P	500	622	Q	2000	569	R	5000	609	N	50	696	O	200	622
o-Terphenyl	A	1.0	1740	B	2.5	1670	C	10	1790	D	25	1680	E	100	1720
	F	250	1810												
n-Triacontane	A	1.0	1580	B	2.5	1460	C	10	1600	D	25	1480	E	100	1540
	F	250	1540												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM

Service Request: K1509353
Calibration Date: 04/15/2015

Initial Calibration Summary
Diesel and Residual Range Organics - Silica Gel Treated

Calibration ID: CAL13980
Instrument ID: GC21

Column: ZB-1

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Diesel Range Organics (DRO)	MS	AverageRF	% RSD	9.2		≤ 20
Residual Range Organics (RRO)	MS	AverageRF	% RSD	7.4		≤ 20
o-Terphenyl	SURR	AverageRF	% RSD	3.2		≤ 20
n-Triacontane	SURR	AverageRF	% RSD	3.3		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM

Service Request: K1509353
Calibration Date: 04/15/2015
Date Analyzed: 04/15/2015 -
04/23/2015

Second Source Calibration Verification
Diesel and Residual Range Organics - Silica Gel Treated

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration ID: CAL13980
Units: ppm

File ID: J:\GC21\DATA\041515F\0415F034.D
J:\GC21\DATA\041515F\0415F066.D
J:\GC21\DATA\042315F\0423F028.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	980	1160	1140	-2	NA	± 15 %	AverageRF
Residual Range Organics (RRO)	1000	920	624	573	-8	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM

Service Request: K1509353
Date Analyzed: 08/28/2015

Continuing Calibration Verification Summary
Diesel and Residual Range Organics - Silica Gel Treated

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration Date: 04/15/2015
Calibration ID: CAL13980
Analysis Lot: KWG1508220
Units: ppm
Column ID: ZB-1

File ID: J:\GC21\DATA\082815F\0828F012.D
J:\GC21\DATA\082815F\0828F014.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1000	1160	1190	2	NA	± 15	AverageRF
Residual Range Organics (RRO)	1000	1000	624	639	2	NA	± 15	AverageRF
o-Terphenyl	50	48	1730	1680	-3	NA	± 15	AverageRF
n-Triacontane	50	46	1530	1420	-7	NA	± 15	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM

Service Request: K1509353
Date Analyzed: 08/28/2015

Continuing Calibration Verification Summary
Diesel and Residual Range Organics - Silica Gel Treated

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration Date: 04/15/2015
Calibration ID: CAL13980
Analysis Lot: KWG1508220
Units: ppm
Column ID: ZB-1

File ID: J:\GC21\DATA\082815F\0828F046.D
J:\GC21\DATA\082815F\0828F048.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1100	1160	1260	8	NA	± 15	AverageRF
Residual Range Organics (RRO)	1000	1100	624	668	7	NA	± 15	AverageRF
o-Terphenyl	50	52	1730	1790	3	NA	± 15	AverageRF
n-Triacontane	50	50	1530	1520	-1	NA	± 15	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM

Service Request: K1509353

Analysis Run Log
Diesel and Residual Range Organics - Silica Gel Treated

Analysis Method: NWTPH-Dx

Analysis Lot: KWG1508220
Instrument ID: GC21
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0828F012.D	Continuing Calibration Verification	KWG1508220-1	8/28/2015	10:29		8/28/2015	10:45
0828F014.D	Continuing Calibration Verification	KWG1508220-1	8/28/2015	10:52		8/28/2015	11:08
0828F016.D	Instrument Blank	KWG1508220-5	8/28/2015	11:15		8/28/2015	11:31
0828F018.D	Lab Control Sample	KWG1508111-2	8/28/2015	11:37		8/28/2015	11:53
0828F020.D	Method Blank	KWG1508111-3	8/28/2015	12:00		8/28/2015	12:16
0828F022.D	Soil-7+50	K1509353-001	8/28/2015	12:22		8/28/2015	12:38
0828F024.D	Soil-7+50DUP	KWG1508111-1	8/28/2015	12:44		8/28/2015	13:00
0828F046.D	Continuing Calibration Verification	KWG1508220-2	8/28/2015	16:46		8/28/2015	17:02
0828F048.D	Continuing Calibration Verification	KWG1508220-2	8/28/2015	17:08		8/28/2015	17:24
0828F050.D	Instrument Blank	KWG1508220-6	8/28/2015	17:30		8/28/2015	17:46
0828F052.D	ZZZZZZ	ZZZZZZ	8/28/2015	17:52		8/28/2015	18:08
0828F054.D	ZZZZZZ	ZZZZZZ	8/28/2015	18:15		8/28/2015	18:31
0828F056.D	ZZZZZZ	ZZZZZZ	8/28/2015	18:37		8/28/2015	18:53
0828F058.D	ZZZZZZ	ZZZZZZ	8/28/2015	18:59		8/28/2015	19:15
0828F060.D	ZZZZZZ	ZZZZZZ	8/28/2015	19:21		8/28/2015	19:37
0828F062.D	ZZZZZZ	ZZZZZZ	8/28/2015	19:43		8/28/2015	19:59
0828F064.D	ZZZZZZ	ZZZZZZ	8/28/2015	20:05		8/28/2015	20:21
0828F066.D	ZZZZZZ	ZZZZZZ	8/28/2015	20:27		8/28/2015	20:43
0828F068.D	ZZZZZZ	ZZZZZZ	8/28/2015	20:50		8/28/2015	21:06
0828F070.D	ZZZZZZ	ZZZZZZ	8/28/2015	21:12		8/28/2015	21:28
0828F072.D	Continuing Calibration Verification	KWG1508220-3	8/28/2015	21:34		8/28/2015	21:50
0828F074.D	Instrument Blank	KWG1508220-7	8/28/2015	21:56		8/28/2015	22:12
0828F076.D	ZZZZZZ	ZZZZZZ	8/28/2015	22:18		8/28/2015	22:34
0828F078.D	ZZZZZZ	ZZZZZZ	8/28/2015	22:40		8/28/2015	22:56
0828F080.D	ZZZZZZ	ZZZZZZ	8/28/2015	23:02		8/28/2015	23:18
0828F082.D	ZZZZZZ	ZZZZZZ	8/28/2015	23:24		8/28/2015	23:40
0828F084.D	ZZZZZZ	ZZZZZZ	8/28/2015	23:47		8/29/2015	00:03
0828F086.D	ZZZZZZ	ZZZZZZ	8/29/2015	00:09		8/29/2015	00:25
0828F088.D	ZZZZZZ	ZZZZZZ	8/29/2015	00:31		8/29/2015	00:47
0828F090.D	ZZZZZZ	ZZZZZZ	8/29/2015	00:53		8/29/2015	01:09
0828F092.D	ZZZZZZ	ZZZZZZ	8/29/2015	01:15		8/29/2015	01:31
0828F094.D	ZZZZZZ	ZZZZZZ	8/29/2015	01:37		8/29/2015	01:53
0828F096.D	Continuing Calibration Verification	KWG1508220-4	8/29/2015	01:59		8/29/2015	02:15
0828F098.D	Instrument Blank	KWG1508220-8	8/29/2015	02:22		8/29/2015	02:38

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM

Service Request: K1509353

Analysis Run Log
Diesel and Residual Range Organics - Silica Gel Treated

Analysis Method: NWTPH-Dx

Analysis Lot: KWG1508220
Instrument ID: GC21
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0828F100.D	ZZZZZZ	ZZZZZZ	8/29/2015	02:44		8/29/2015	03:00
0828F102.D	ZZZZZZ	ZZZZZZ	8/29/2015	03:06		8/29/2015	03:22
0828F104.D	ZZZZZZ	ZZZZZZ	8/29/2015	03:28		8/29/2015	03:44
0828F106.D	Continuing Calibration Verification	KWG1508220-9	8/29/2015	03:50		8/29/2015	04:06
0828F108.D	Instrument Blank	KWG1508220-10	8/29/2015	04:12		8/29/2015	04:28

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: Evraz Riverbank SCM
Sample Matrix: Soil

Service Request: K1509353
Date Extracted: 08/27/2015

Extraction Prep Log
Diesel and Residual Range Organics - Silica Gel Treated

Extraction Method: EPA 3550B
Analysis Method: NWTPH-Dx

Extraction Lot: KWG1508111
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
Soil-7+50	K1509353-001	08/25/15	08/26/15	30.178g	10ml	87.2	
Soil-7+50DUP	KWG1508111-1	08/25/15	08/26/15	30.318g	10ml	87.2	
Method Blank	KWG1508111-3	NA	NA	30.318g	10ml	NA	
Lab Control Sample	KWG1508111-2	NA	NA	30.000g	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis



Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Benchsheet

Service Request #: K1509285, K1509342, KQ1509574,
K1509353
Test: TS
Method: 160.3 Modified

Run #: 459823
Balance ID: K-Balance-21B

Pan ID:	Lab Code:	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
	K1509285-001	1.29	7.00	6.64	5.35	76.4	
	K1509285-002	1.29	5.51	6.17	4.88	88.6	
	K1509285-003	1.29	2.50	3.64	2.35	94.0	
	K1509285-004	1.30	3.24	4.32	3.02	93.2	
	K1509285-005	1.29	6.38	7.15	5.86	91.8	
	K1509342-001	1.29	10.08	8.72	7.43	73.7	
	K1509342-002	1.29	10.30	10.36	9.07	88.1	
	K1509342-002DUP	1.29	10.04	10.13	8.84	88.0	<1
	K1509342-003	1.30	10.10	11.09	9.79	96.9	
	K1509342-004	1.29	10.02	9.99	8.70	86.8	
	K1509342-005	1.29	10.17	10.21	8.92	87.7	
	K1509353-001	1.30	11.01	10.90	9.60	87.2	
	K1509353-001DUP	1.29	11.12	10.97	9.68	87.1	<1

Oven1	Oven ID	Temp In	Temp Out	Date In	Time In	Date Out	Time Out	Thermometer ID
	K-OVEN-07	105	105	08/27/15	17:02	08/28/15	10:26	

	Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
Calibration1	K-Balance-16	1.01, 100.00	1.00, 100.00	08/27/15	16:50	08/27/15	17:02
Calibration2	K-Balance-16	1.00, 100.00	1.00, 100.00	08/28/15	10:37	08/28/15	10:41

Comments: DJM; Approved: J. Coronado 8/28/15



Diesel and Residual Range Organics- Silica Gel Treated

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F022.D	Instrument:	GC21
Acqu Date:	08/28/2015 12:22	Quant Date:	08/29/2015 07:15
Run Type:	SMPL	Vial:	27
Lab ID:	K1509353-001	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:	IV	Matrix:	SOIL
Prod Code:	NWTPH-Dx NW_TPH	Collect Date:	08/25/2015	Receive Date:	08/26/2015

Analysis Lot:	KWG1508220	Prep Lot:	KWG1508111	Report Group:	K1509353
Analysis Method:	NWTPH-Dx	Prep Method:	EPA 3550B		
Prep Ref:	1462002	Prep Date:	08/27/2015		

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:	Diesel and Residual Range Organics - Silica Gel Treated	Report List ID:	LJ10933
		Method ID:	MJ1081
MB Ref:	J:\GC21\DATA\082815F\0828F020.D	Quant based on Report List	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.36	-0.01	38593	22.26	89	50-150	OK
n-Triacontane	7.46	0.00	33907	22.12	88	50-150	OK

Target Compounds

			Final Conc. Units:		mg/Kg Dry Weight		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		45944	39.48	15	J	
Residual Range Organics (RRO)	6.53		97399	156.19	59	J	

Prep Amount: 30.178 g **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1
Solids: 87.2 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F022.D Vial: 27
 Acq On : 28 Aug 2015 12:22 pm Operator: CHARVEY
 Sample : K1509353-001 SGT Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 07:10:33 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Initial Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 4-Bromofluorobenzene	2.70	17652	21.368 ppm
Spiked Amount 50.000	Recovery	=	42.74%
2) S o-Terphenyl	5.36	38593	22.257 ppm
Spiked Amount 50.000	Recovery	=	44.51%
3) S n-Triacontane	7.46	33907	22.119 ppm
Spiked Amount 50.000	Recovery	=	44.24%
Target Compounds			
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	64516	44.760 ppm
5) H C10-C22ex DRO [AZ]	3.05	40726	29.277 ppm
6) H C10-C25ex DRO [AK102]	3.05	61118	44.047 ppm
7) H C10-C28in DRO [8015]	3.15	97648	69.491 ppm
8) H C12-C25ex DRO [NWTPH]	3.69	45944	39.476 ppm
9) H C22-C32in RRO [AZ]	6.00	97559	251.114 ppm
10) H C25-C36in RRO [NWTPH]	6.53	97399	156.190 ppm
11) H C25-C36in RRO [AK103]	6.63	105530	129.917 ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	151520	137.231 ppm

Data File : J:\GC21\DATA\082815F\0828F022.D

Vial: 27

Acq On : 28 Aug 2015 12:22 pm

Operator: CHARVEY

Sample : K1509353-001 SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 7:15 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

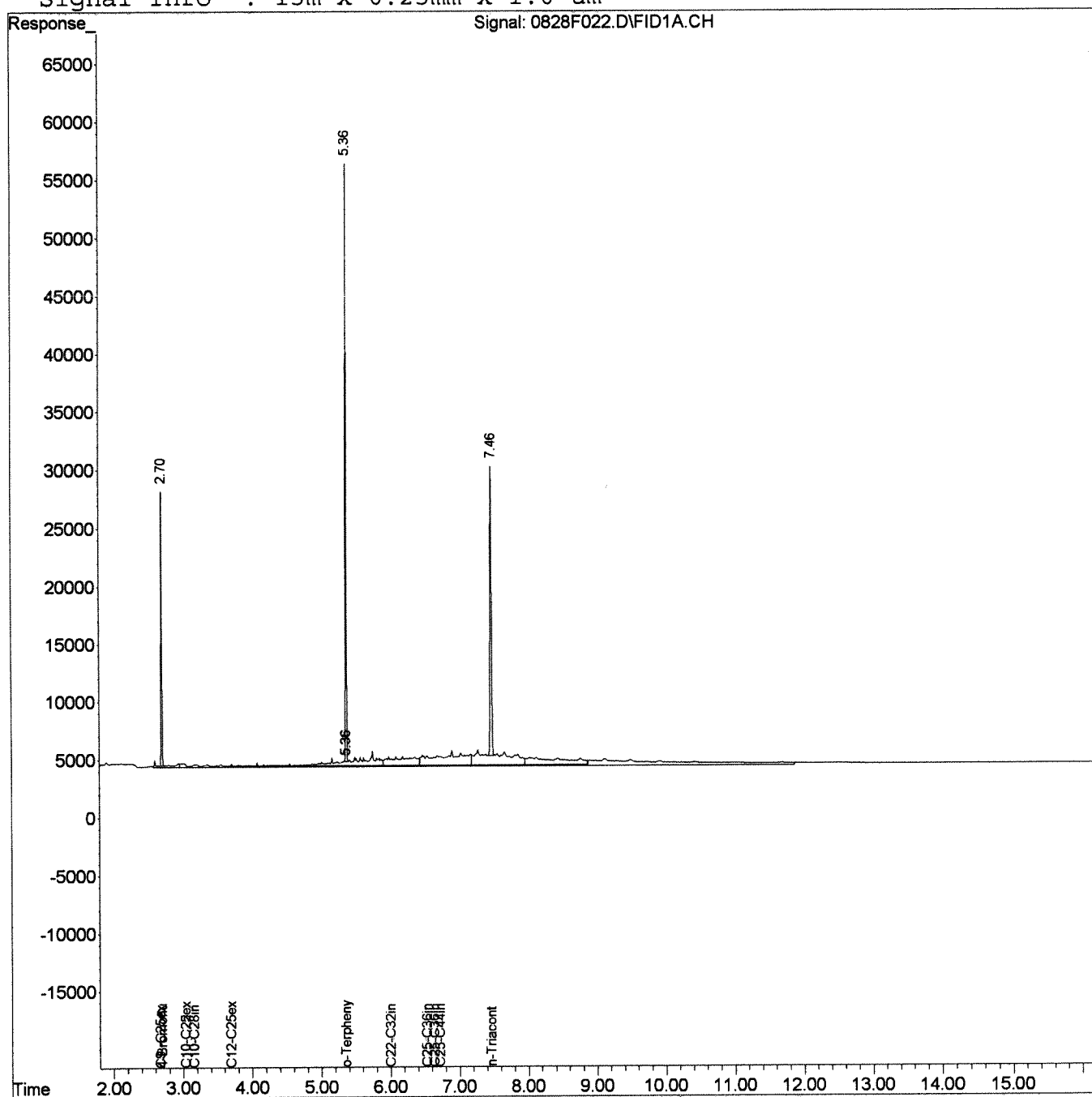
Response via : Single Level Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F022.D

Vial: 27

Acq On : 28 Aug 2015 12:22 pm

Operator: CHARVEY

Sample : K1509353-001 SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

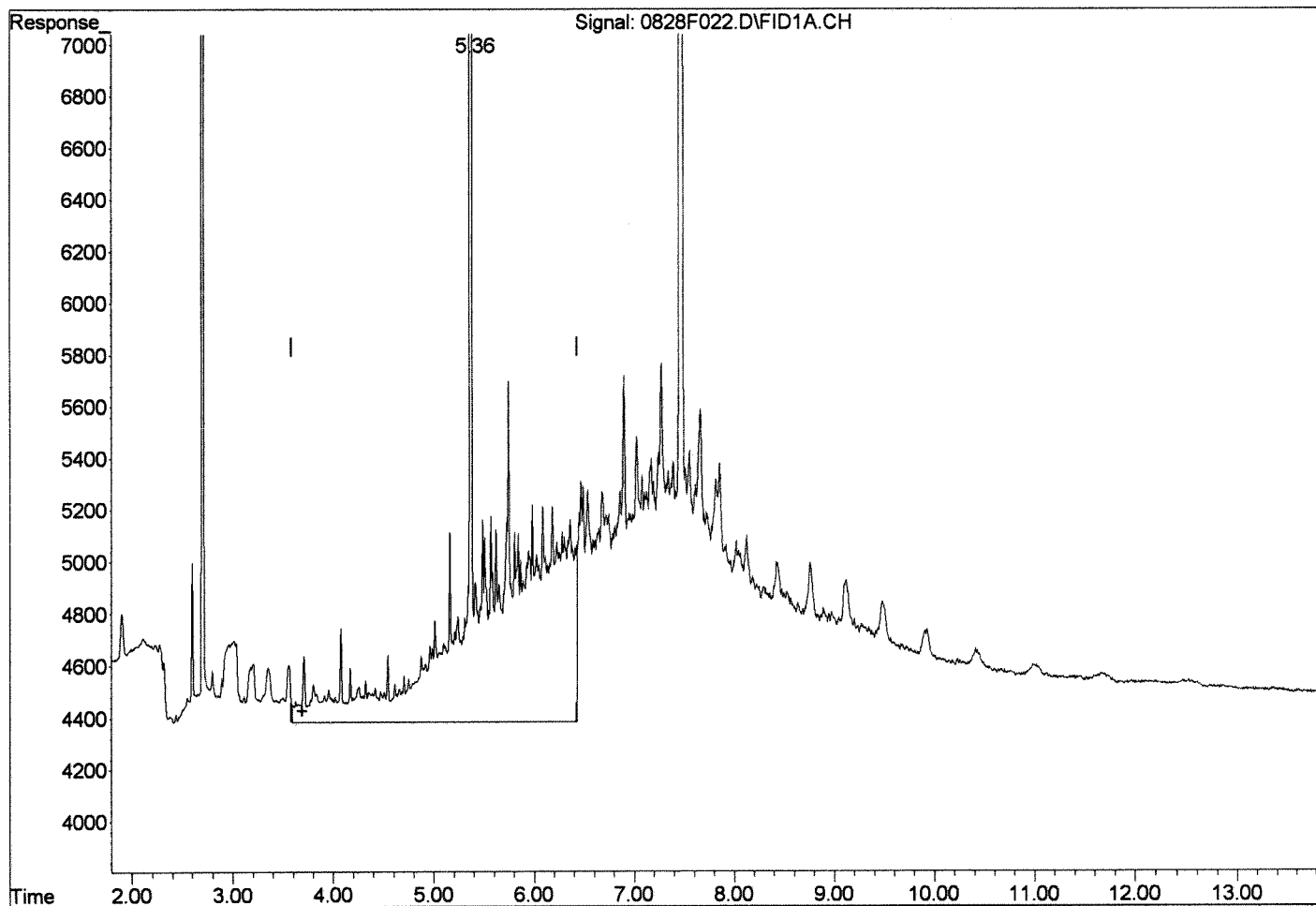
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F022.D\FID1A.CH

(8) C12-C25ex DRO [NWTPH] (H)

Manual Integration:

3.69min 47.666ppm

Before

response 55476

08/29/15

Handwritten signatures: [Signature] and [Signature]

(+) = Expected Retention Time

0828F022.D 042315F.M

Sat Aug 29 07:15:04 2015

Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F022.D

Vial: 27

Acq On : 28 Aug 2015 12:22 pm

Operator: CHARVEY

Sample : K1509353-001 SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

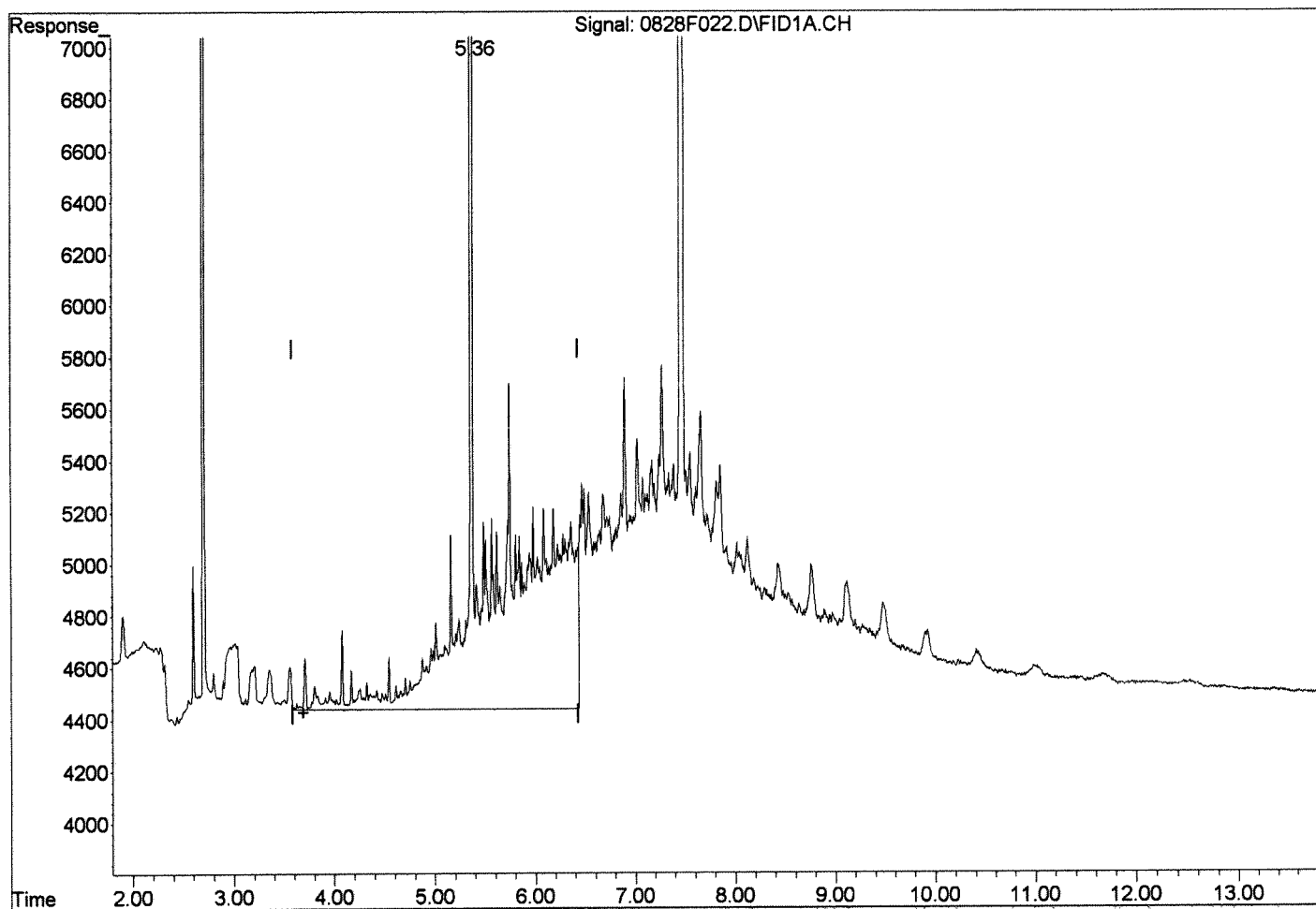
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



(8) C12-C25ex DRO [NWTPH] (H)

3.69min 39.476ppm

response 45944

Manual Integration:

After

Baseline/Shoulder

08/29/15

[Handwritten signature]

[Handwritten signature]

(+) = Expected Retention Time

0828F022.D 042315F.M

Sat Aug 29 07:15:25 2015

Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F022.D

Vial: 27

Acq On : 28 Aug 2015 12:22 pm

Operator: CHARVEY

Sample : K1509353-001 SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

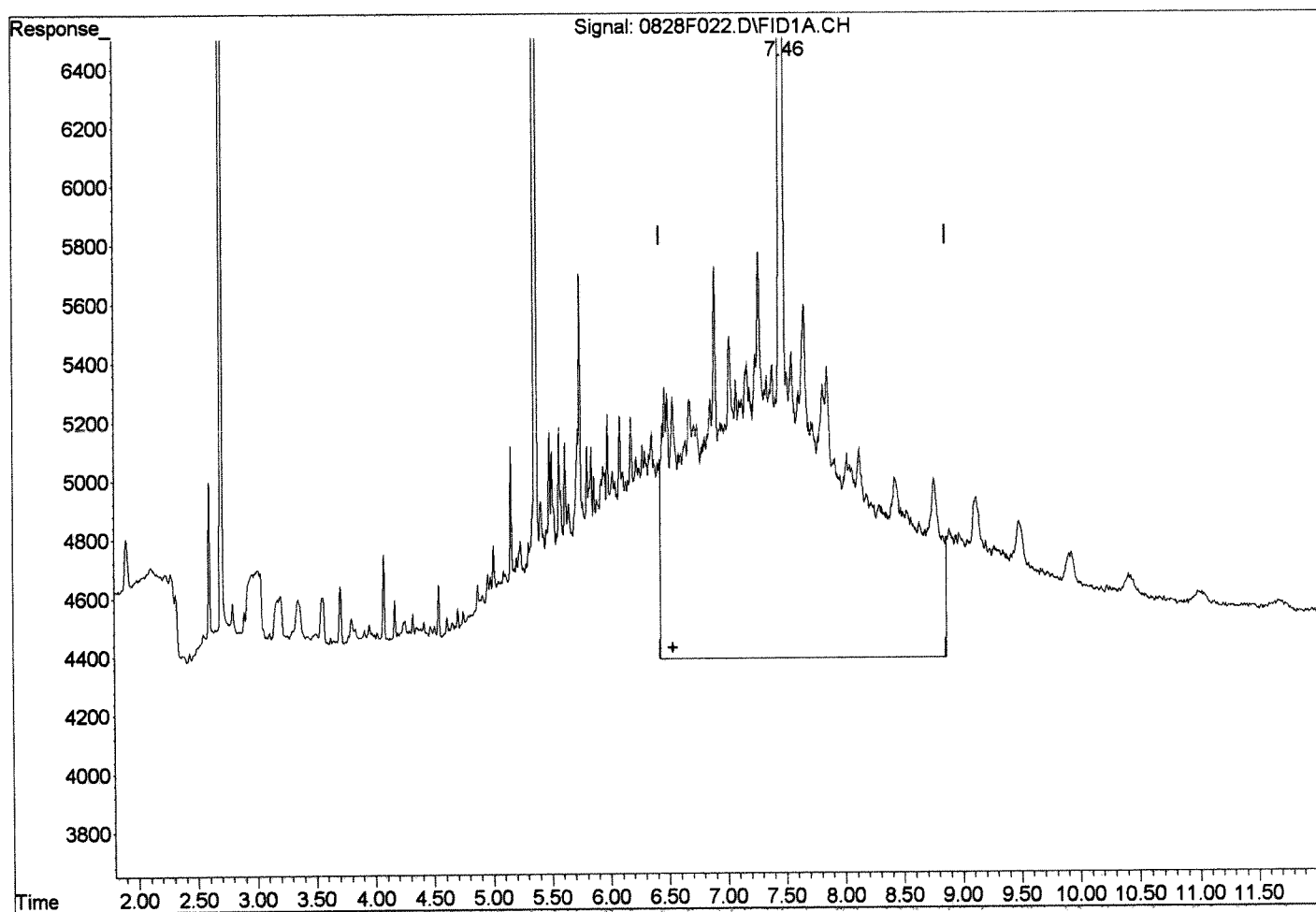
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F022.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

Manual Integration:

6.53min 169.229ppm

Before

response 105530

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time

0828F022.D 042315F.M

Sat Aug 29 07:15:35 2015

Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F022.D

Vial: 27

Acq On : 28 Aug 2015 12:22 pm

Operator: CHARVEY

Sample : K1509353-001 SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

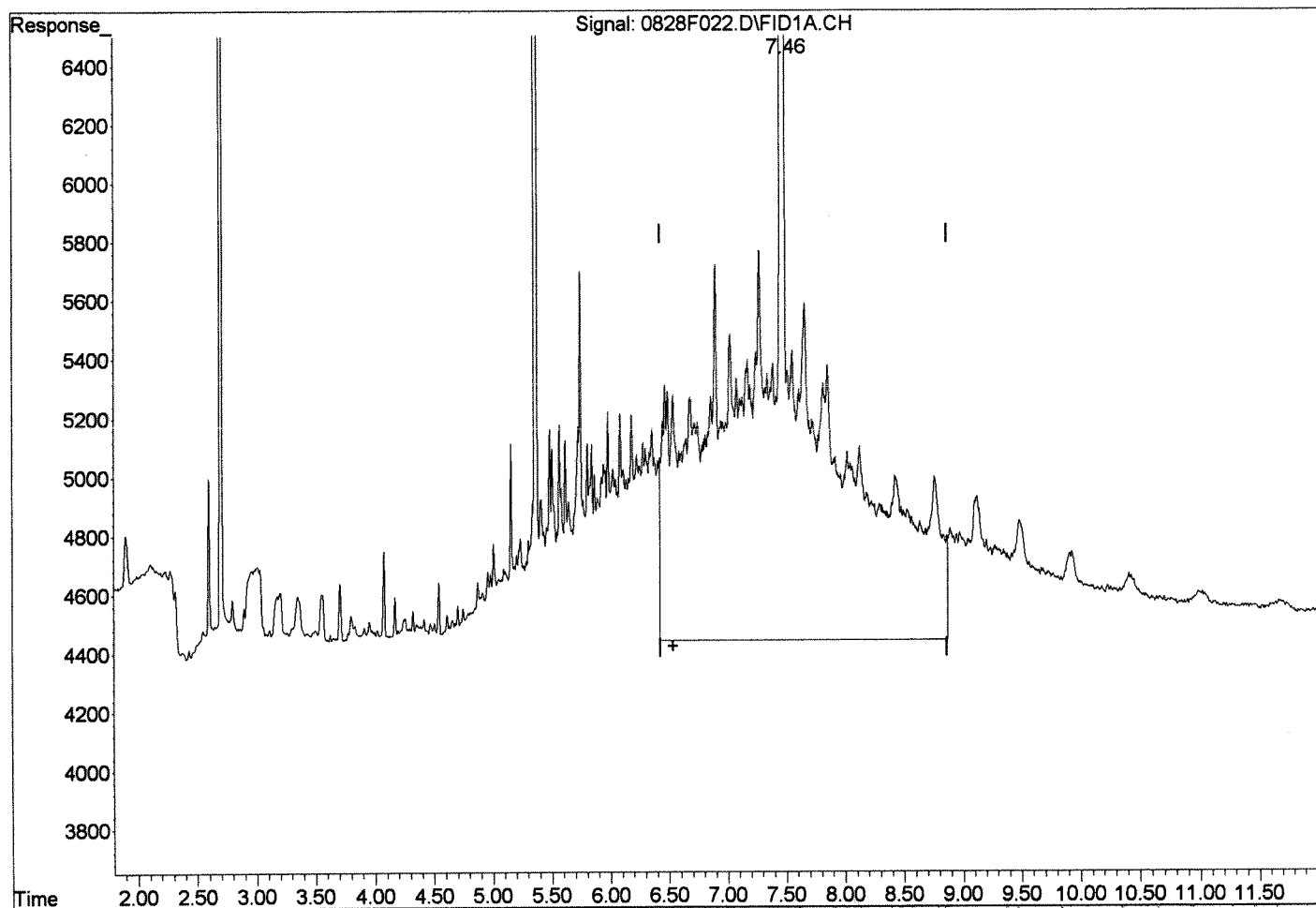
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F022.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.53min 156.190ppm

response 97399

Manual Integration:

After

Baseline/Shoulder

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time

0828F022.D 042315F.M

Sat Aug 29 07:15:57 2015

Exception Report

Data File: J:\GC21\DATA\082815F\0828F020.D
Lab ID: KWG1508111-3
RunType: MB
Matrix: SOIL

Date Acquired: 08/28/2015 12:00
Date Quantitated: 08/29/2015 07:14
Batch ID: KWG1508220
Analysis Method: NWTPH-Dx
MethodJoinID: MJ1081

Sample Exceptions

SGT

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review:

Secondary Review:

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F020.D	Instrument:	GC21
Acqu Date:	08/28/2015 12:00	Quant Date:	08/29/2015 07:14
Run Type:	MB	Vial:	26
Lab ID:	KWG1508111-3	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	SOIL
Prod Code:	NWTPH-Dx NW_TPH	Collect Date:		Receive Date:	08/27/2015

Analysis Lot:	KWG1508220	Prep Lot:	KWG1508111	Report Group:	
Analysis Method:	NWTPH-Dx	Prep Method:	EPA 3550B		
Prep Ref:	1462005	Prep Date:	08/27/2015		

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1081
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.37	0.00	39370	22.71	91	50-150	OK
n-Triacontane	7.47	0.01	34592	22.57	90	50-150	OK

Target Compounds

			Final Conc. Units:		mg/Kg Wet Weight		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		32252	27.71	9.14	J	
Residual Range Organics (RRO)	6.53		32951	52.84	17.4	J	

Prep Amount: 30.318 g **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F020.D Vial: 26
 Acq On : 28 Aug 2015 12:00 pm Operator: CHARVEY
 Sample : KWG1508111-3 MB SGT Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 07:10:32 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Initial Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 4-Bromofluorobenzene	2.70	19069	23.083 ppm
Spiked Amount 50.000	Recovery	=	46.17%
2) S o-Terphenyl	5.37	39370	22.705 ppm
Spiked Amount 50.000	Recovery	=	45.41%
3) S n-Triacontane	7.47	34592	22.566 ppm
Spiked Amount 50.000	Recovery	=	45.13%
Target Compounds			
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	49083	34.053 ppm
5) H C10-C22ex DRO [AZ]	3.05	33799	24.297 ppm
6) H C10-C25ex DRO [AK102]	3.05	45687	32.926 ppm
7) H C10-C28in DRO [8015]	3.15	63473	45.171 ppm
8) H C12-C25ex DRO [NWTPH]	3.69	32252	27.712 ppm
9) H C22-C32in RRO [AZ]	6.00	42201	108.624 ppm
10) H C25-C36in RRO [NWTPH]	6.53	32951	52.841 ppm
11) H C25-C36in RRO [AK103]	6.63	38892	47.879 ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	54906	49.728 ppm

Data File : J:\GC21\DATA\082815F\0828F020.D

Vial: 26

Acq On : 28 Aug 2015 12:00 pm

Operator: CHARVEY

Sample : KWG1508111-3 MB SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 7:14 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

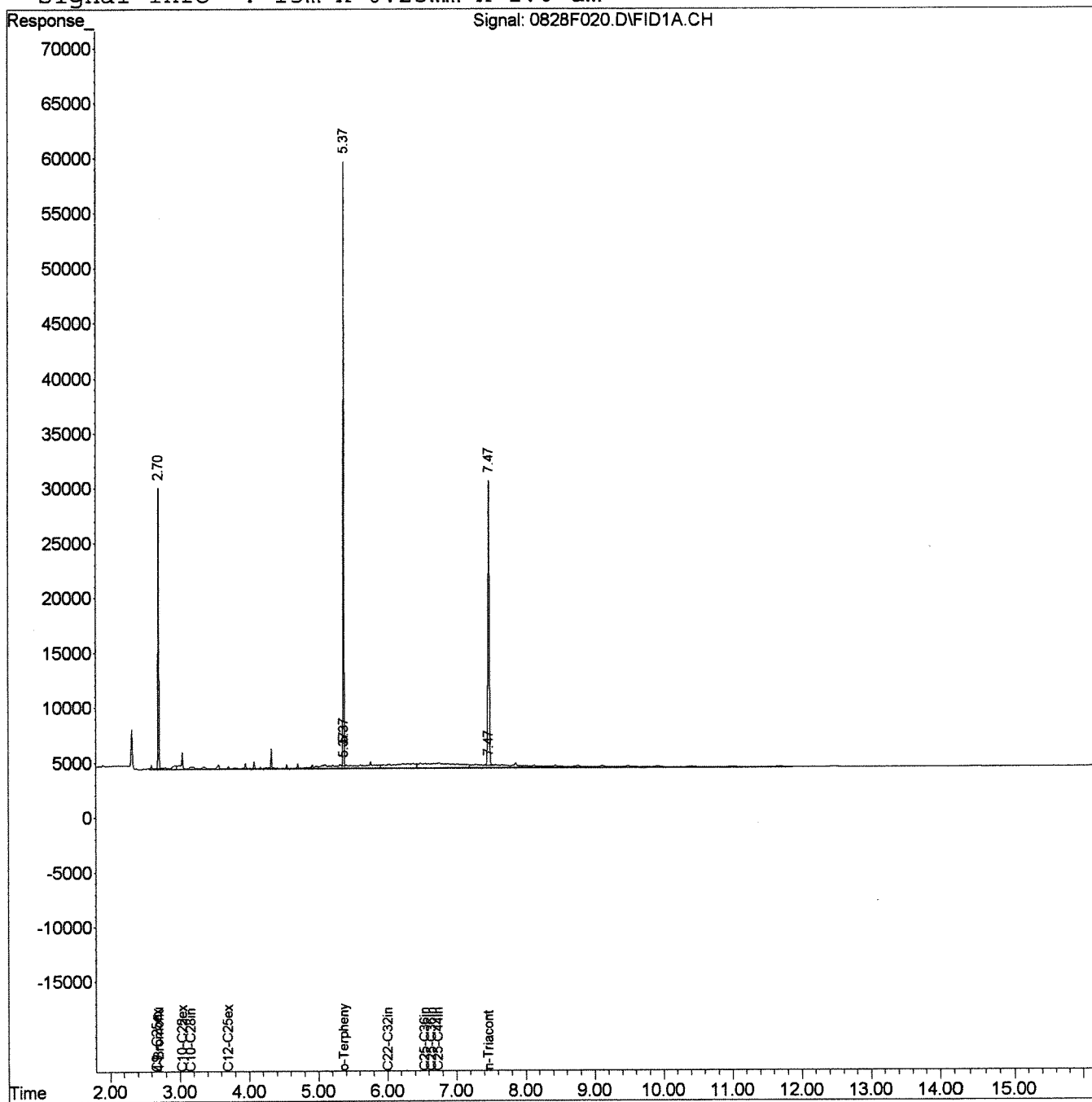
Response via : Single Level Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um



Data File : J:\GC21\DATA\082815F\0828F020.D

Vial: 26

Acq On : 28 Aug 2015 12:00 pm

Operator: CHARVEY

Sample : KWG1508111-3 MB SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

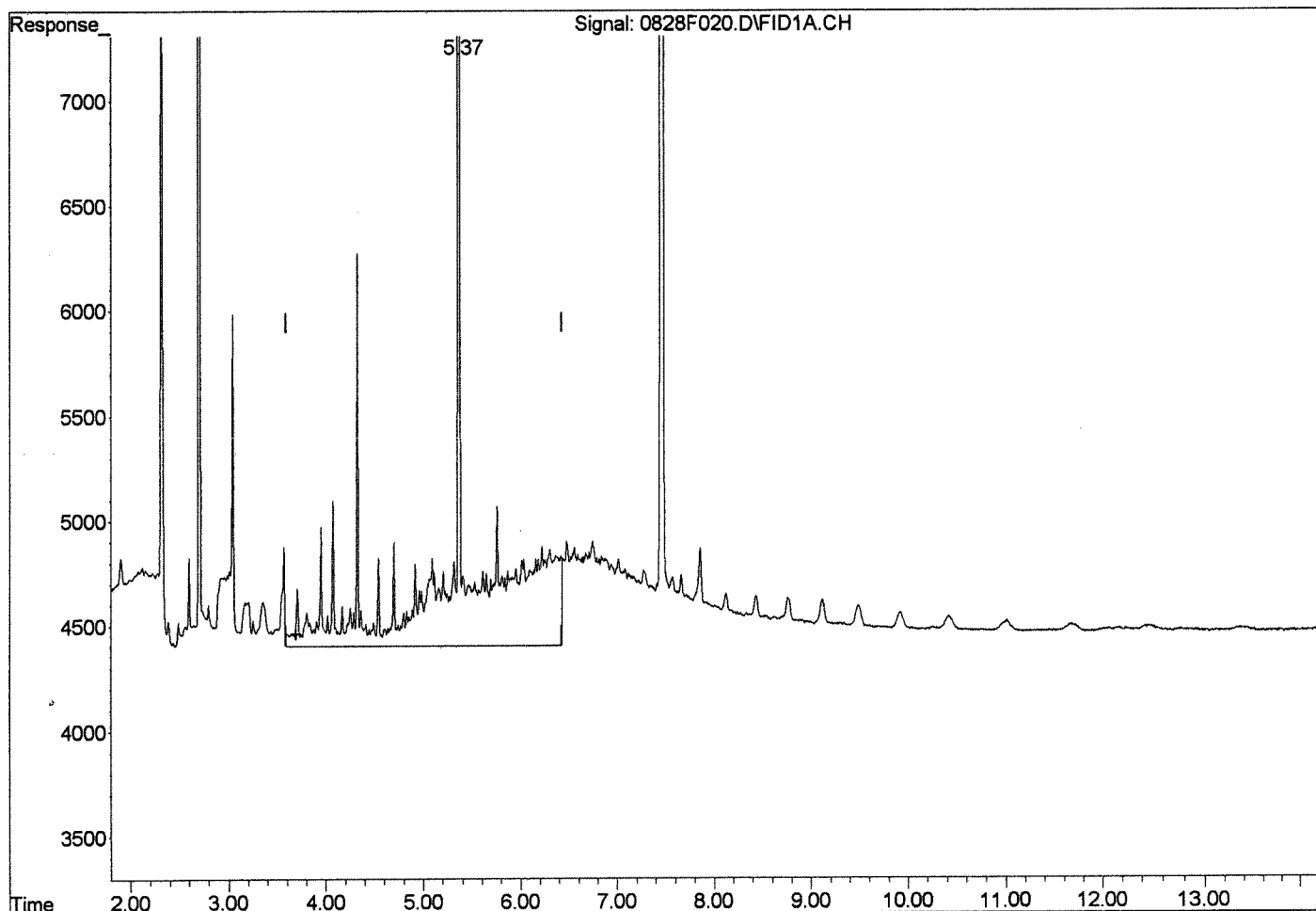
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F020.D\FID1A.CH

(8) C12-C25ex DRO [NWTPH] (H)

Manual Integration:

3.69min 33.225ppm

Before

response 38668

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time

0828F020.D 042315F.M

Sat Aug 29 07:13:35 2015

Data File : J:\GC21\DATA\082815F\0828F020.D

Vial: 26

Acq On : 28 Aug 2015 12:00 pm

Operator: CHARVEY

Sample : KWG1508111-3 MB SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

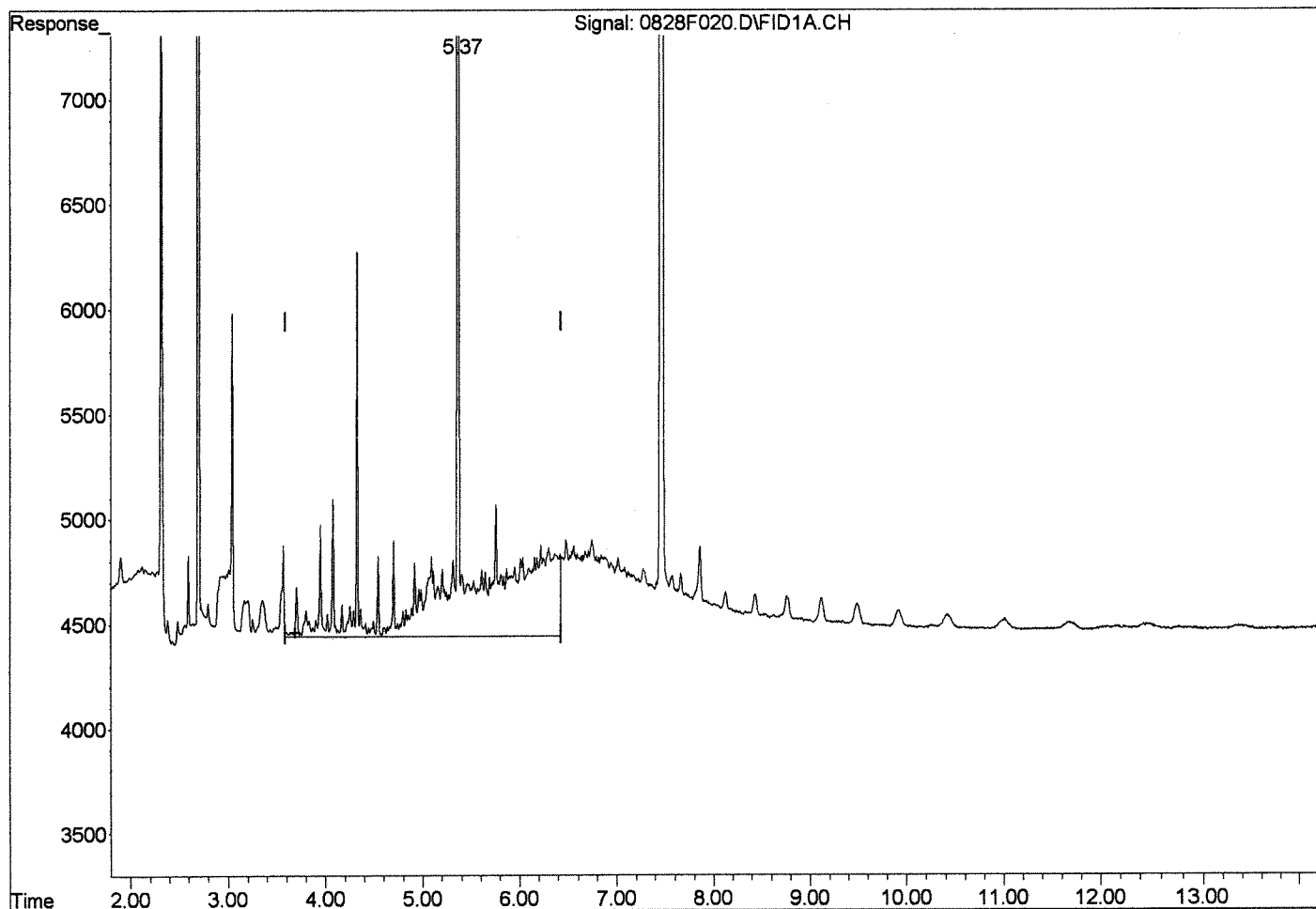
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F020.D\FID1A.CH

(8) C12-C25ex DRO [NWTPH] (H)

3.69min 27.712ppm

response 32252

Manual Integration:

After

Baseline/Shoulder

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time

0828F020.D 042315F.M

Sat Aug 29 07:14:01 2015

Data File : J:\GC21\DATA\082815F\0828F020.D

Vial: 26

Acq On : 28 Aug 2015 12:00 pm

Operator: CHARVEY

Sample : KWG1508111-3 MB SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

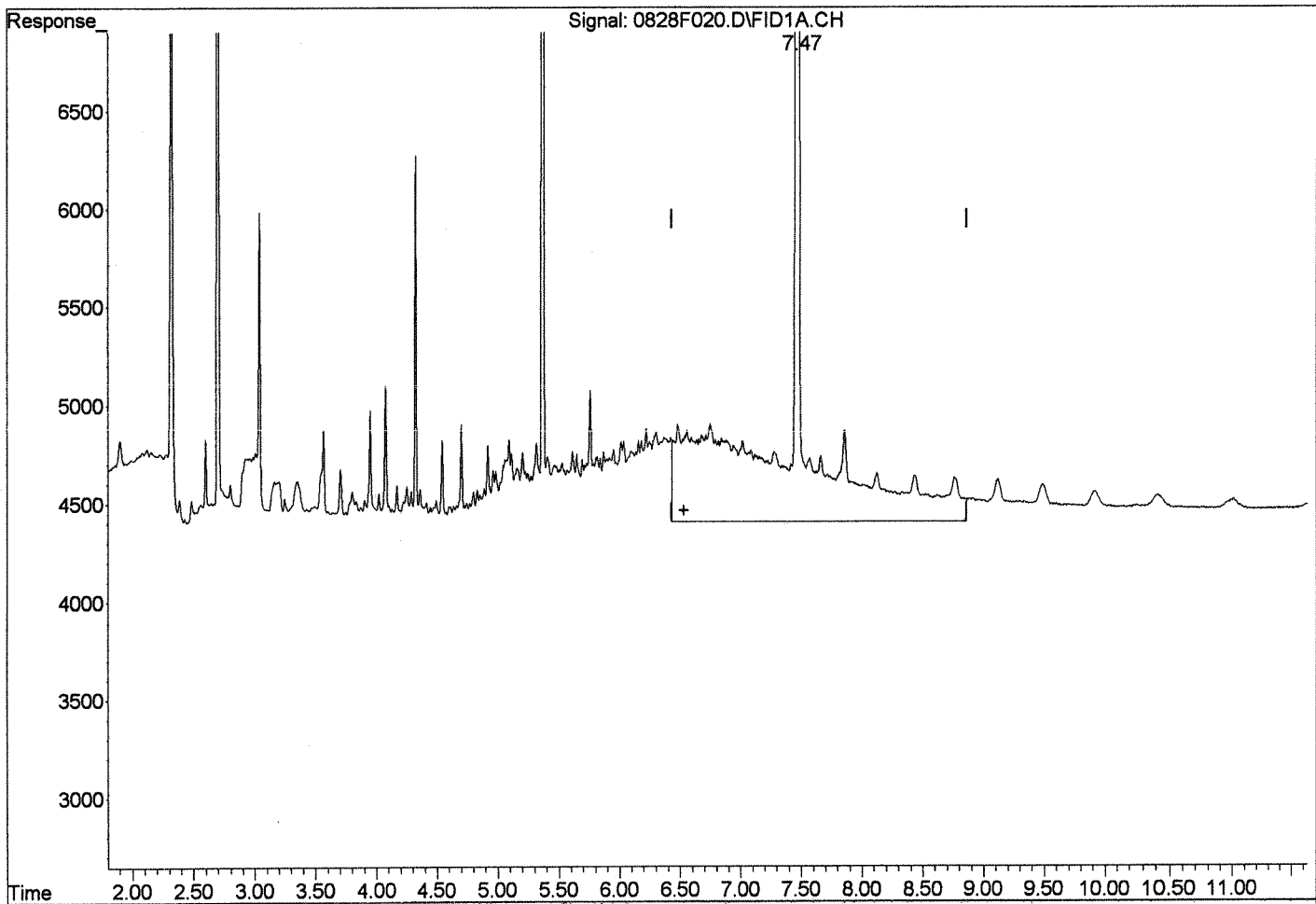
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F020.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

Manual Integration:

6.53min 62.368ppm

Before

response 38892

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time

0828F020.D 042315F.M

Sat Aug 29 07:14:14 2015

Data File : J:\GC21\DATA\082815F\0828F020.D

Vial: 26

Acq On : 28 Aug 2015 12:00 pm

Operator: CHARVEY

Sample : KWG1508111-3 MB SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

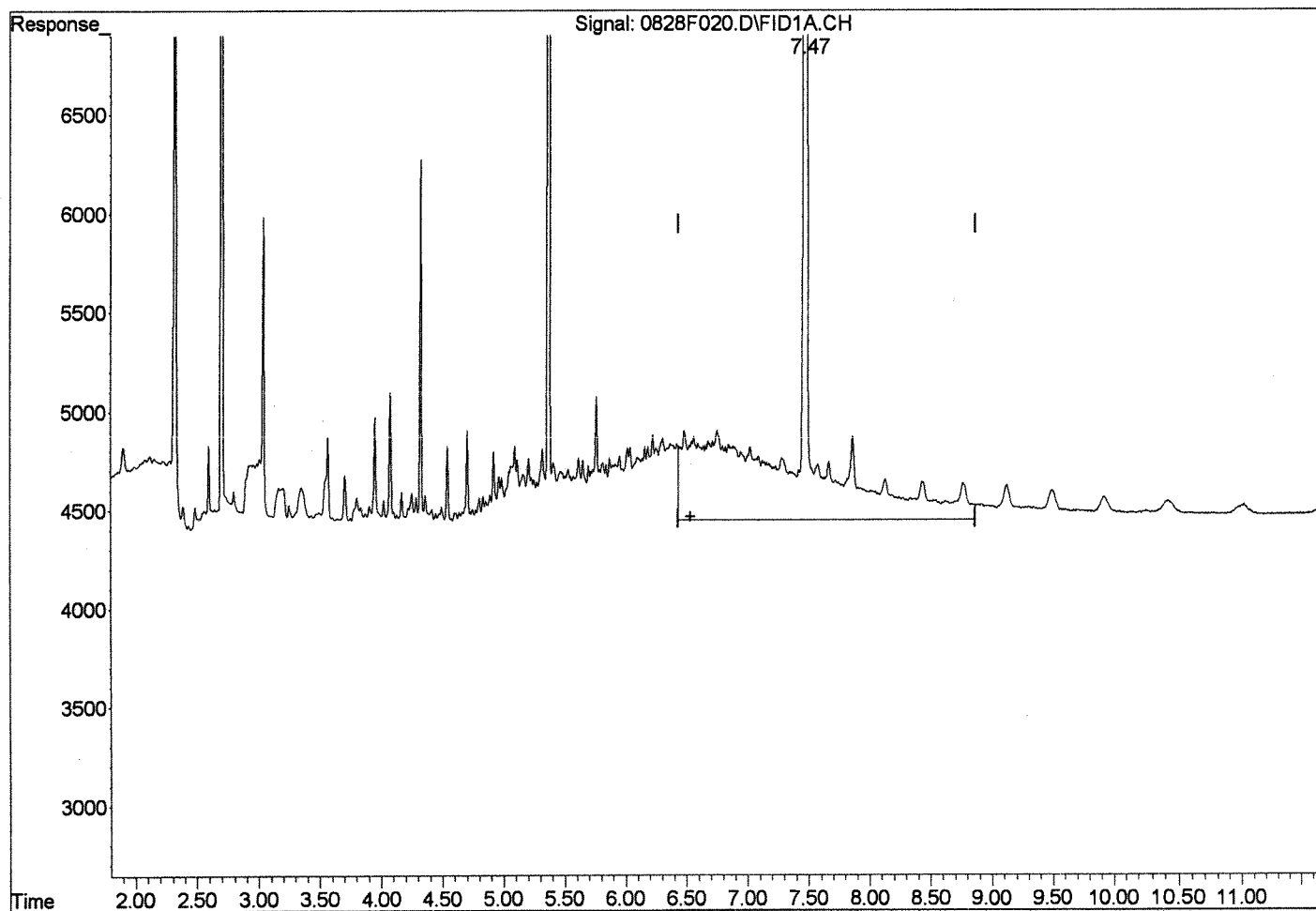
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F020.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.53min 52.841ppm

response 32951

Manual Integration:

After

Baseline/Shoulder

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time

0828F020.D 042315F.M

Sat Aug 29 07:14:30 2015

Exception Report

Data File: J:\GC21\DATA\082815F\0828F024.D
Lab ID: KWG1508111-1 -- K1509353-001DUP
RunType: DUP
Matrix: SOIL

Date Acquired: 08/28/2015 12:44
Date Quantitated: 08/29/2015 07:16
Batch ID: KWG1508220
Analysis Method: NWTPH-Dx
MethodJoinID: MJ1081

Sample Exceptions

SGT

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review:

Secondary Review:

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F024.D	Instrument:	GC21
Acqu Date:	08/28/2015 12:44	Quant Date:	08/29/2015 07:16
Run Type:	DUP	Vial:	28
Lab ID:	KWG1508111-1	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	SOIL
Prod Code:	NWTPH-Dx NW_TPH	Collect Date:		Receive Date:	08/27/2015

Analysis Lot:	KWG1508220	Prep Lot:	KWG1508111	Report Group:	
Analysis Method:	NWTPH-Dx	Prep Method:	EPA 3550B		
Prep Ref:	1462003	Prep Date:	08/27/2015		

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1081
MB Ref:	J:\GC21\DATA\082815F\0828F020.D	Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.36	-0.01	36926	21.30	85	50-150 OK	
n-Triacontane	7.46	0.00	32838	21.42	86	50-150 OK	

Target Compounds

			Final Conc. Units:		mg/Kg Dry Weight		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		49486	42.52	16.1	J	
Residual Range Organics (RRO)	6.53		108597	174.15	65.9	J	

Prep Amount: 30.318 g **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1
Solids: 87.2 %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F024.D Vial: 28
 Acq On : 28 Aug 2015 12:44 pm Operator: CHARVEY
 Sample : K1509353-001 DUP SGT Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 07:10:34 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Initial Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um

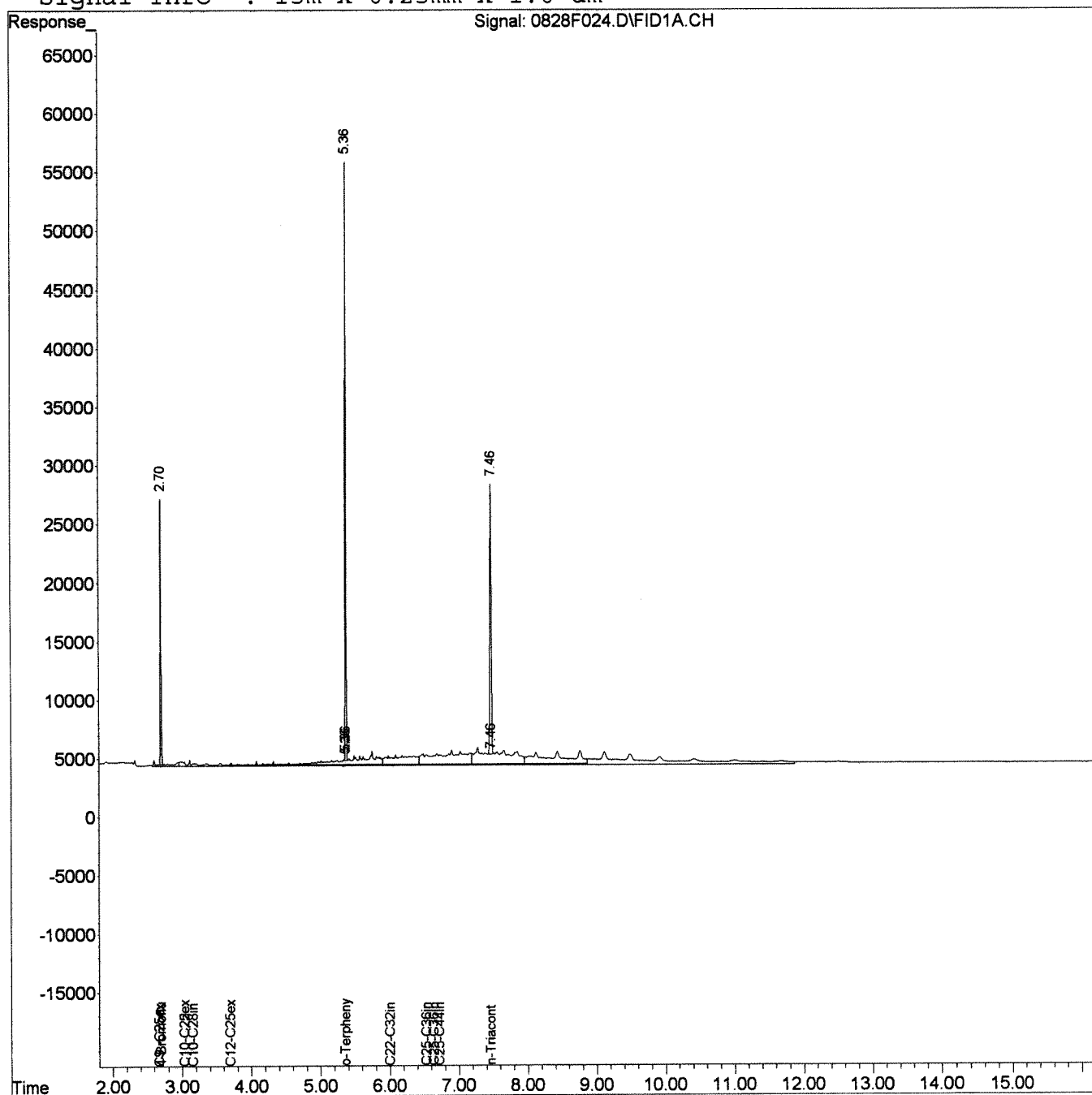
Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 4-Bromofluorobenzene	2.70	17490	21.172 ppm
Spiked Amount 50.000	Recovery	=	42.34%
2) S o-Terphenyl	5.36	36926	21.296 ppm
Spiked Amount 50.000	Recovery	=	42.59%
3) S n-Triacontane	7.46	32838	21.422 ppm
Spiked Amount 50.000	Recovery	=	42.84%
Target Compounds			
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	67621	46.914 ppm
5) H C10-C22ex DRO [AZ]	3.05	42800	30.768 ppm
6) H C10-C25ex DRO [AK102]	3.05	64303	46.342 ppm
7) H C10-C28in DRO [8015]	3.15	102910	73.236 ppm
8) H C12-C25ex DRO [NWTPH]	3.69	49486	42.520 ppm
9) H C22-C32in RRO [AZ]	6.00	103174	265.566 ppm
10) H C25-C36in RRO [NWTPH]	6.53	108597	174.148 ppm
11) H C25-C36in RRO [AK103]	6.63	115648	142.373 ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	171472	155.301 ppm

Data File : J:\GC21\DATA\082815F\0828F024.D Vial: 28
Acq On : 28 Aug 2015 12:44 pm Operator: CHARVEY
Sample : K1509353-001 DUP SGT Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 29 7:16 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
Last Update : Fri Aug 28 11:06:15 2015
Response via : Single Level Calibration
DataAcq Meth : SVF_FB.M

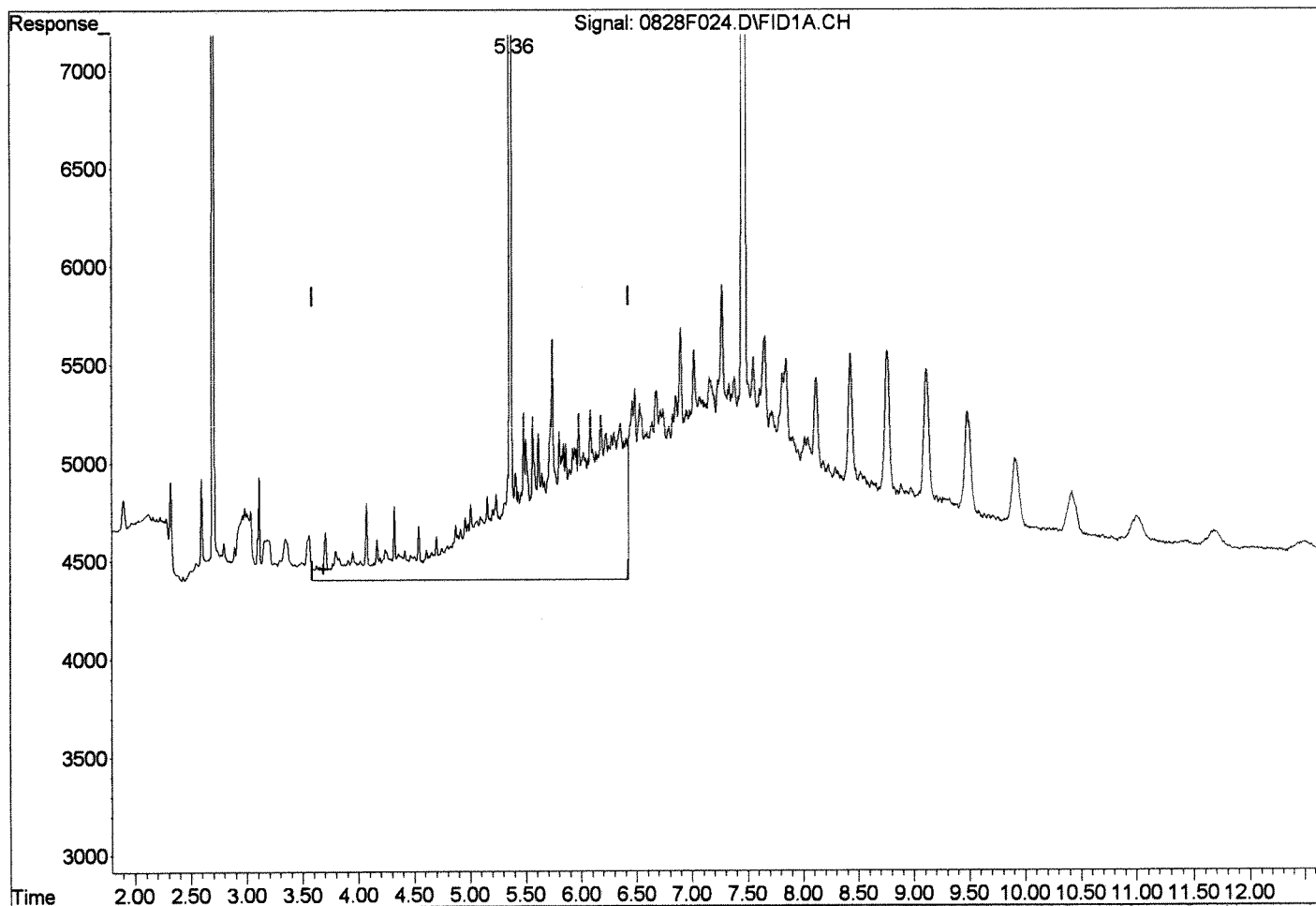
Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F024.D Vial: 28
 Acq On : 28 Aug 2015 12:44 pm Operator: CHARVEY
 Sample : K1509353-001 DUP SGT Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Multiple Level Calibration



(8) C12-C25ex DRO [NWTPH] (H)

3.69min 49.958ppm

response 58143

Manual Integration:

Before

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time
 0828F024.D 042315F.M Sat Aug 29 07:16:21 2015

Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F024.D

Vial: 28

Acq On : 28 Aug 2015 12:44 pm

Operator: CHARVEY

Sample : K1509353-001 DUP SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

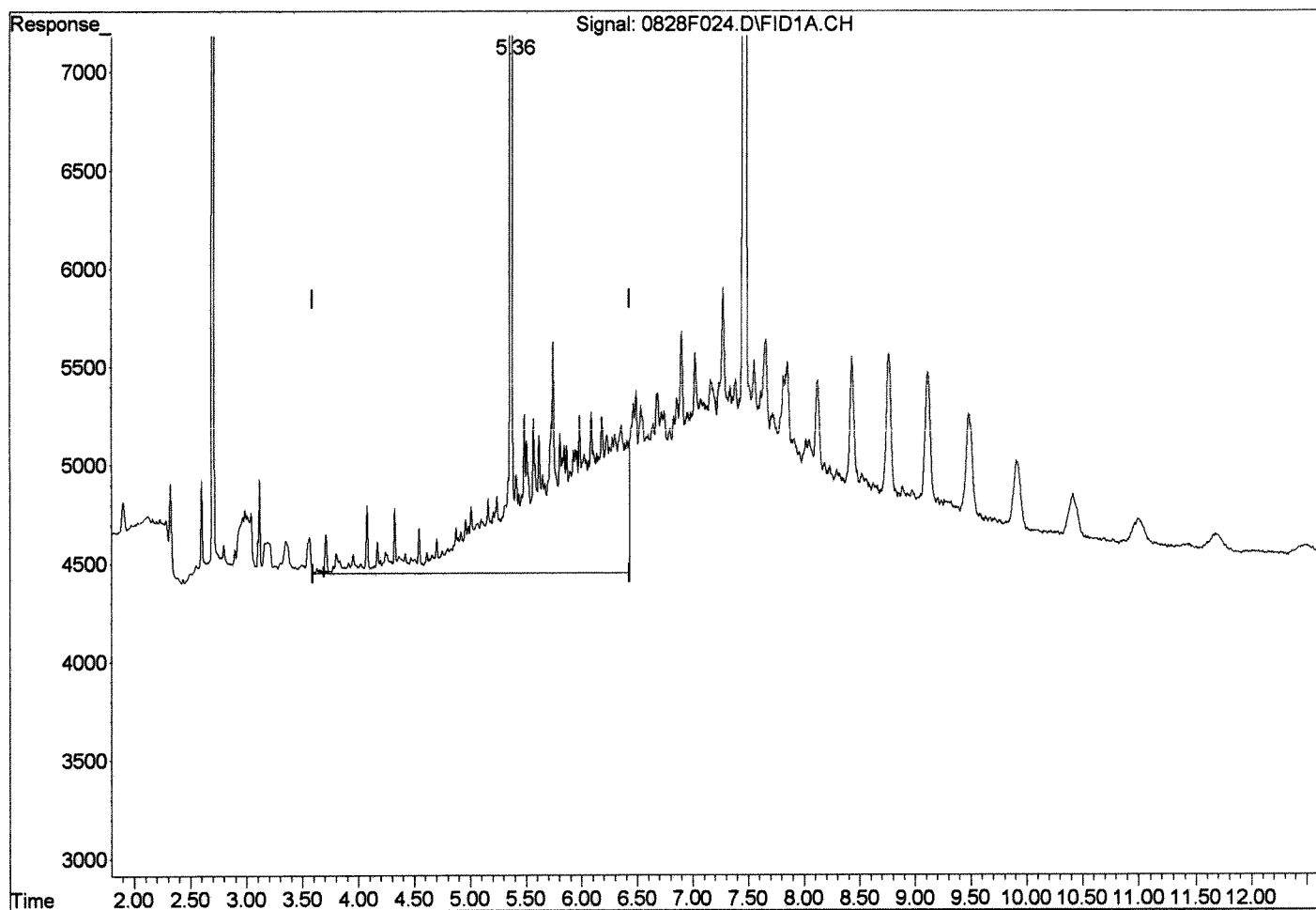
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F024.D\FID1A.CH

(8) C12-C25ex DRO [NWTPH] (H)

3.69min 42.520ppm

response 49486

Manual Integration:

After

Baseline/Shoulder

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time

0828F024.D 042315F.M

Sat Aug 29 07:16:30 2015

Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F024.D

Vial: 28

Acq On : 28 Aug 2015 12:44 pm

Operator: CHARVEY

Sample : K1509353-001 DUP SGT

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

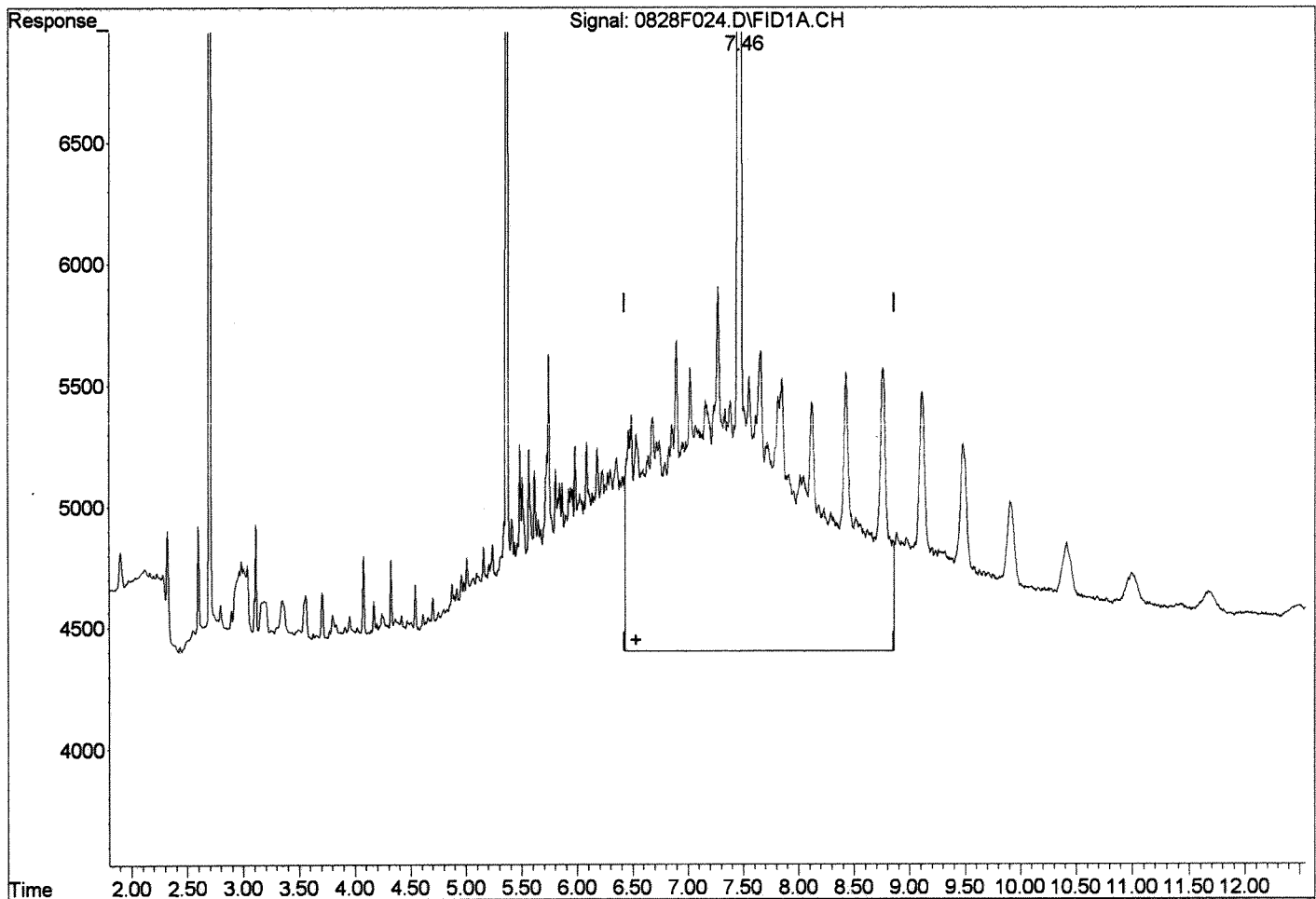
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F024.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

Manual Integration:

6.53min 185.455ppm

Before

response 115648

08/29/15

AMM CH

(+) = Expected Retention Time

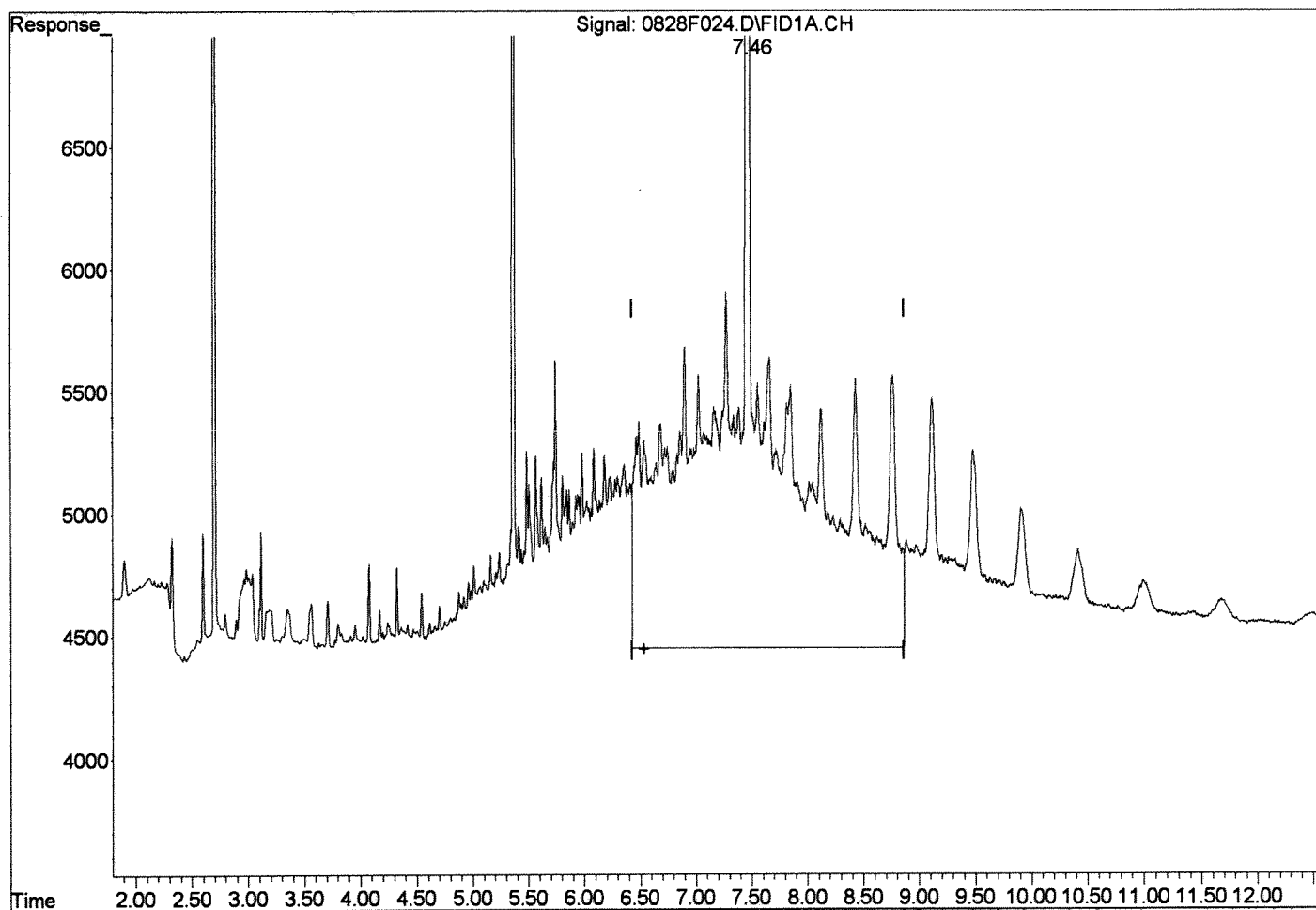
0828F024.D 042315F.M

Sat Aug 29 07:16:41 2015

Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F024.D Vial: 28
 Acq On : 28 Aug 2015 12:44 pm Operator: CHARVEY
 Sample : K1509353-001 DUP SGT Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Multiple Level Calibration



Signal: 0828F024.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.53min 174.148ppm

response 108597

Manual Integration:

After

Baseline/Shoulder

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time
 0828F024.D 042315F.M Sat Aug 29 07:16:56 2015

Exception Report

Data File: J:\GC21\DATA\082815F\0828F018.D
Lab ID: KWG1508111-2
RunType: LCS
Matrix: SOIL

Date Acquired: 08/28/2015 11:37
Date Quantitated: 08/29/2015 07:10
Batch ID: KWG1508220
Analysis Method: NWTPH-Dx
MethodJoinID: MJ1081

Sample Exceptions

SGT

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review:

Secondary Review:

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F018.D	Instrument:	GC21
Acqu Date:	08/28/2015 11:37	Quant Date:	08/29/2015 07:10
Run Type:	LCS	Vial:	25
Lab ID:	KWG1508111-2	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	SOIL
Prod Code:	NWTPH-Dx NW_TPH	Collect Date:		Receive Date:	08/27/2015

Analysis Lot:	KWG1508220	Prep Lot:	KWG1508111	Report Group:	
Analysis Method:	NWTPH-Dx	Prep Method:	EPA 3550B		
Prep Ref:	1462004	Prep Date:	08/27/2015		

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1081
MB Ref:	J:\GC21\DATA\082815F\0828F020.D	Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.36	-0.01	41966	24.20	97	50-150 OK	
n-Triacontane	7.46	0.00	36202	23.62	94	50-150 OK	

Target Compounds

			Final Conc. Units:		mg/Kg Wet Weight		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		851122	731.31	244		
Residual Range Organics (RRO)	6.53		255381	409.53	137		

Prep Amount: 30.000 g **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F018.D Vial: 25
Acq On : 28 Aug 2015 11:37 am Operator: CHARVEY
Sample : KWG1508111-2 LCS SGT Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 29 07:10:31 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
Last Update : Fri Aug 28 11:06:15 2015
Response via : Initial Calibration
DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

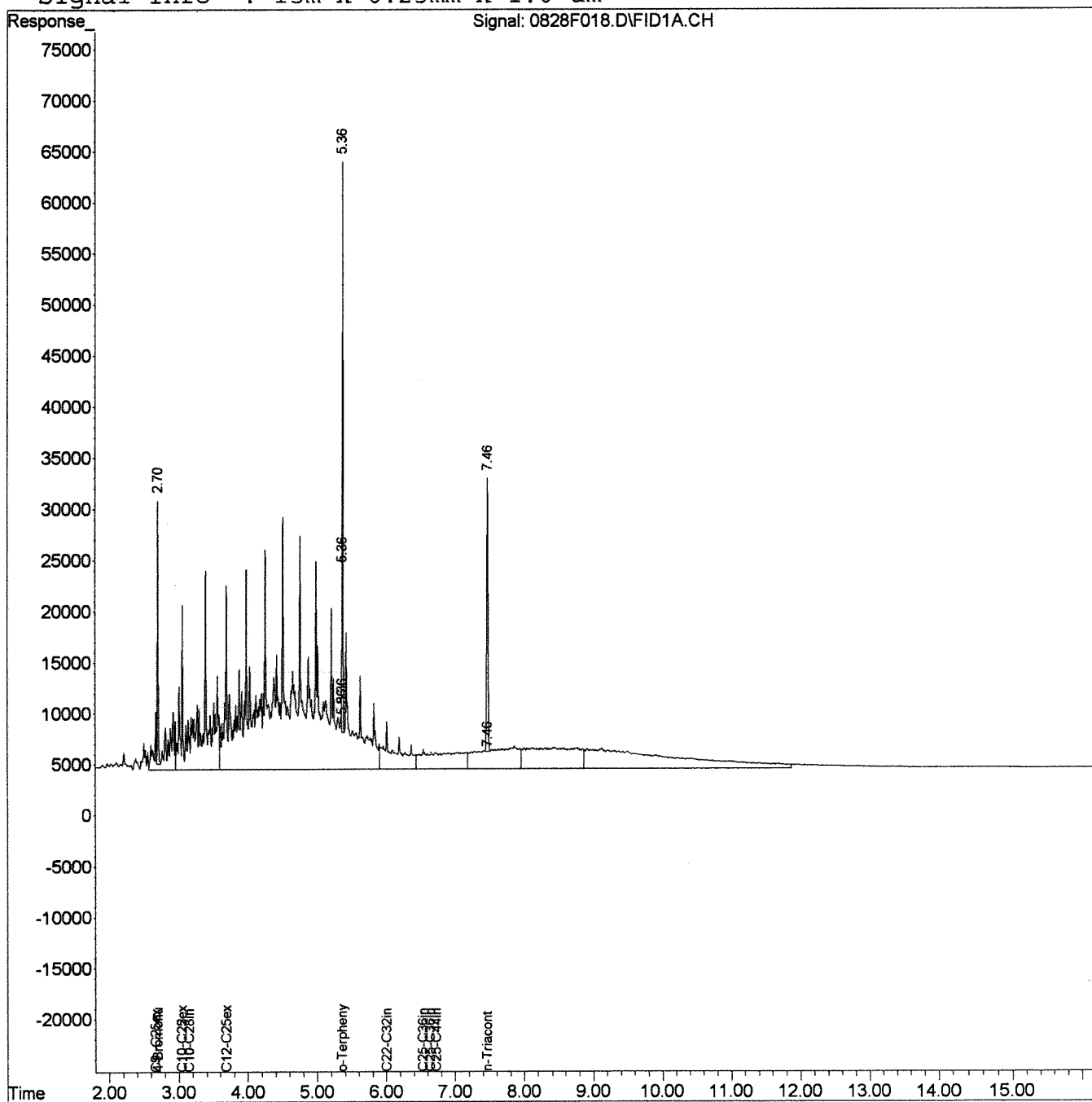
Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 4-Bromofluorobenzene	2.70	20049	24.270 ppm
Spiked Amount 50.000	Recovery	=	48.54%
2) S o-Terphenyl	5.36	41966	24.202 ppm
Spiked Amount 50.000	Recovery	=	48.40%
3) S n-Triacontane	7.46	36202	23.616 ppm
Spiked Amount 50.000	Recovery	=	47.23%
Target Compounds			
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	1050252	728.649 ppm
5) H C10-C22ex DRO [AZ]	3.05	950533	683.315 ppm
6) H C10-C25ex DRO [AK102]	3.05	1005818	724.873 ppm
7) H C10-C28in DRO [8015]	3.15	1072726	763.408 ppm
8) H C12-C25ex DRO [NWTPH]	3.69	851122	731.306 ppm
9) H C22-C32in RRO [AZ]	6.00	205326	528.502 ppm
10) H C25-C36in RRO [NWTPH]	6.53	255381	409.533 ppm
11) H C25-C36in RRO [AK103]	6.63	255381	314.396 ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	437784	396.499 ppm

Data File : J:\GC21\DATA\082815F\0828F018.D Vial: 25
Acq On : 28 Aug 2015 11:37 am Operator: CHARVEY
Sample : KWG1508111-2 LCS SGT Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
Last Update : Fri Aug 28 11:06:15 2015
Response via : Single Level Calibration
DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	90	0828F002.D	1.	DCM		08/28/22015 8:39
2	90	0828F004.D	1.	DCM		08/28/22015 9:01
3	92	0828F006.D	1.	AROMATIC MARKER SVF01-63H		08/28/22015 9:23
4	93	0828F008.D	1.	PAH MARKER SVF01-64N		08/28/22015 9:45
5	91	0828F010.D	1.	ALIPHATICS MARKER SVF01-72K		08/28/22015 10:07
6	96	0828F012.D	1.	DRO 1000/50 SVF01-72P-OK		08/28/22015 10:29
7	97	0828F014.D	1.	RRO 1000 SVF01-72A-OK		08/28/22015 10:51
8	87	0828F016.D	1.	IB		08/28/22015 11:13
9	25	0828F018.D	1.	KWG1508111-2 LCS SGT		08/28/22015 11:35
10	26	0828F020.D	1.	KWG1508111-3 MB SGT		08/28/22015 12:00
11	27	0828F022.D	1.	K1509353-001 SGT		08/28/22015 12:22
12	28	0828F024.D	1.	K1509353-001 DUP SGT		08/28/22015 12:44
13	29	0828F026.D	1.	KWG1508135-2 LCS SGT		08/28/22015 1:06
14	30	0828F028.D	1.	KWG1508135-3 MB SGT		08/28/22015 1:28
15	31	0828F030.D	1.	K1509307-001 SGT		08/28/22015 1:50
16	32	0828F032.D	1.	K1509307-001 DUP SGT		08/28/22015 2:12
17	33	0828F034.D	1.	K1509307-002 SGT		08/28/22015 2:34
18	34	0828F036.D	1.	K1509307-005 SGT		08/28/22015 2:56
19	35	0828F038.D	1.	K1509307-007 SGT		08/28/22015 3:18
20	36	0828F040.D	1.	K1509307-008 SGT		08/28/22015 3:40
21	37	0828F042.D	1.	K1509307-09 SGT		08/28/22015 4:02
22	38	0828F044.D	1.	K1509307-010 SGT		08/28/22015 4:24
23	97	0828F046.D	1.	RRO 1000 SVF01-72A-OK		08/28/22015 4:46
24	96	0828F048.D	1.	DRO 1000/50 SVF01-72P-OK		08/28/22015 5:08
25	87	0828F050.D	1.	IB/SURR		08/28/22015 5:30
26	39	0828F052.D	1.	KWG1507784-5 LCS		08/28/22015 5:52
27	40	0828F054.D	1.	KWG1507784-6 DLCS		08/28/22015 6:15
28	41	0828F056.D	1.	KWG1507784-7 MB		08/28/22015 6:37
29	42	0828F058.D	1.	K1508980-001		08/28/22015 6:59
30	43	0828F060.D	1.	K1508980-002		08/28/22015 7:21
31	44	0828F062.D	1.	K1508980-003		08/28/22015 7:43
32	45	0828F064.D	1.	K1508980-004		08/28/22015 8:05
33	46	0828F066.D	1.	K1508980-005		08/28/22015 8:27
34	47	0828F068.D	1.	K1508980-006		08/28/22015 8:50
35	48	0828F070.D	1.	K1508980-008		08/28/22015 9:12
36	96	0828F072.D	1.	DRO 1000/50 SVF01-72P-OK		08/28/22015 9:34
37	87	0828F074.D	1.	IB/SURR		08/28/22015 9:56
38	49	0828F076.D	1.	K1508980-007		08/28/22015 10:18
39	50	0828F078.D	1.	K1508980-007 MS		08/28/22015 10:40
40	51	0828F080.D	1.	K1508980-007 DMS		08/28/22015 11:02
41	52	0828F082.D	1.	K1508980-009		08/28/22015 11:24
42	53	0828F084.D	1.	K1508980-010		08/28/22015 11:47
43	54	0828F086.D	1.	K1508980-011		08/29/22015 12:09
44	55	0828F088.D	1.	K1508980-012		08/29/22015 12:31
45	56	0828F090.D	1.	K1508980-013		08/29/22015 12:53
46	57	0828F092.D	1.	K1508980-014		08/29/22015 1:15
47	58	0828F094.D	1.	K1508980-016		08/29/22015 1:37
48	96	0828F096.D	1.	DRO 1000/50 SVF01-72P-OK		08/29/22015 1:59
49	87	0828F098.D	1.	IB/SURR		08/29/22015 2:22
50	59	0828F100.D	1.	K1508980-015		08/29/22015 2:44
51	60	0828F102.D	1.	K1508980-015 MS		08/29/22015 3:06
52	61	0828F104.D	1.	K1508980-015 DMS		08/29/22015 3:28
53	96	0828F106.D	1.	DRO 1000/50 SVF01-72P		08/29/22015 3:50
54	87	0828F108.D	1.	IB/SURR		08/29/22015 4:12
55	90	0828F110.D	1.	DCM		08/29/22015 4:35

re run injections errors

Cal# 13980
 KWG1508220
 run # 459955

Data File : J:\GC21\DATA\082815F\0828F006.D Vial: 92
 Acq On : 28 Aug 2015 9:23 am Operator: CHARVEY
 Sample : AROMATICS MARKER SVF01-63H Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 07:01:56 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Initial Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc	Units
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System Monitoring Compounds

Target Compounds

4)	H	C9 -C25ex DRO [TPH-Diesel]	2.67	3986617	2765.853	ppm
5)	H	C10-C22ex DRO [AZ]	3.05	3926198	2822.447	ppm
6)	H	C10-C25ex DRO [AK102]	3.05	3929083	2831.611	ppm
7)	H	C10-C28in DRO [8015]	3.15	3933507	2799.291	ppm
8)	H	C12-C25ex DRO [NWTPH]	3.69	28332	24.344	ppm
9)	H	C22-C32in RRO [AZ]	6.00	12156	31.289	ppm
10)	H	C25-C36in RRO [NWTPH]	6.53	16106	25.828	ppm
11)	H	C25-C36in RRO [AK103]	6.63	16106	19.828	ppm
12)	H	C25-C44in RRO [TPH-Oil]	6.73	35759	32.387	ppm

Data File : J:\GC21\DATA\082815F\0828F006.D

Vial: 92

Acq On : 28 Aug 2015 9:23 am

Operator: CHARVEY

Sample : AROMATICS MARKER SVF01-63H

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 7:01 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

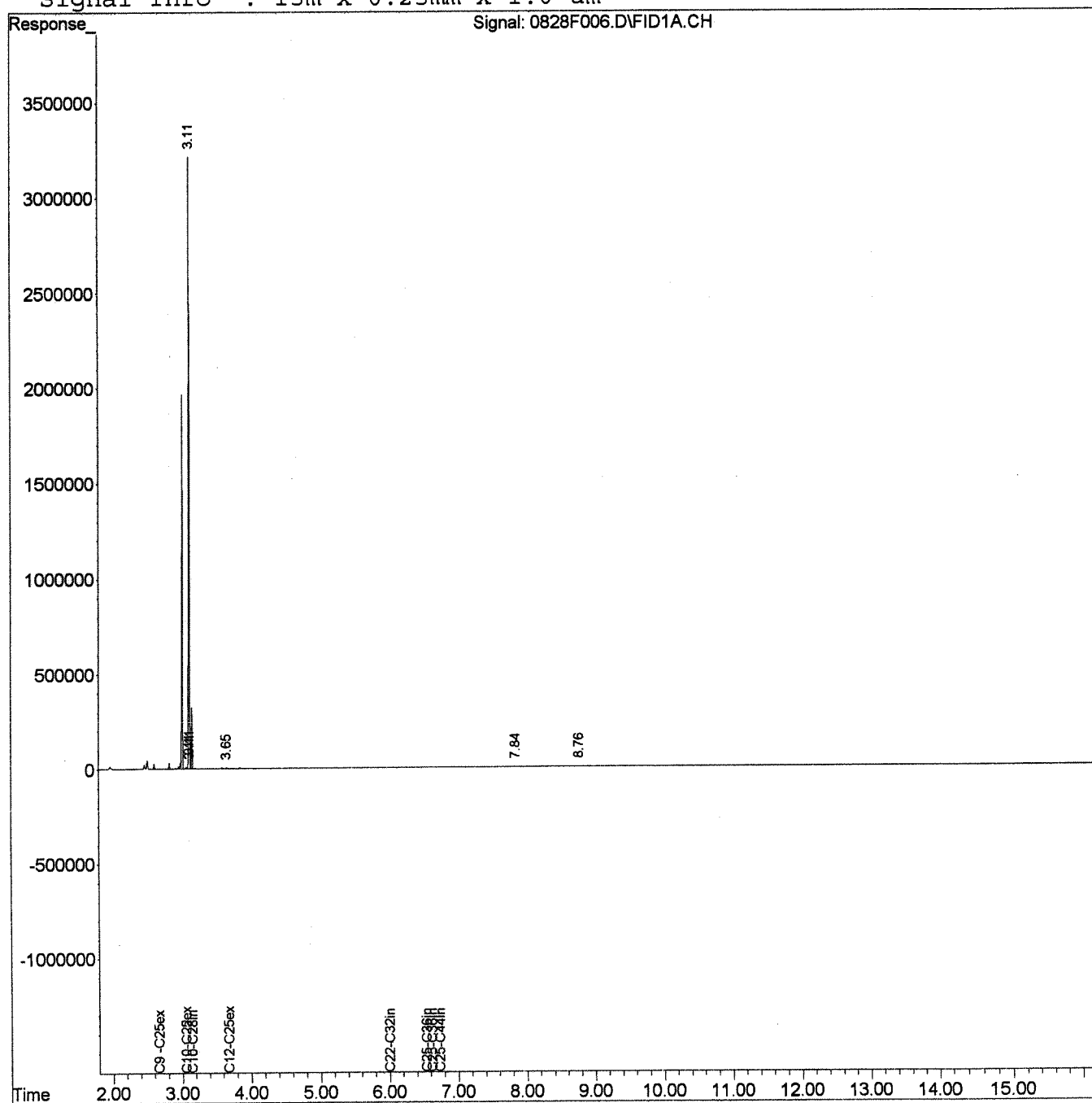
Response via : Single Level Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um



Data File : J:\GC21\DATA\082815F\0828F008.D

Vial: 93

Acq On : 28 Aug 2015 9:45 am

Operator: CHARVEY

Sample : PAH MARKER SVF01-64N

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 07:02:04 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Initial Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um

Compound		R.T.	Response	Conc	Units

System Monitoring Compounds					
Target Compounds					
4) H	C9 -C25ex DRO [TPH-Diesel]	2.67	333724	231.533	ppm
5) H	C10-C22ex DRO [AZ]	3.05	289457	208.084	ppm
6) H	C10-C25ex DRO [AK102]	3.05	330276	238.023	ppm
7) H	C10-C28in DRO [8015]	3.15	492593	350.555	ppm
8) H	C12-C25ex DRO [NWTPH]	3.69	305842	262.787	ppm
9) H	C22-C32in RRO [AZ]	6.00	298802	769.106	ppm
10) H	C25-C36in RRO [NWTPH]	6.53	267136	428.383	ppm
11) H	C25-C36in RRO [AK103]	6.63	267136	328.868	ppm
12) H	C25-C44in RRO [TPH-Oil]	6.73	287943	260.789	ppm

Data File : J:\GC21\DATA\082815F\0828F008.D

Vial: 93

Acq On : 28 Aug 2015 9:45 am

Operator: CHARVEY

Sample : PAH MARKER SVF01-64N

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 7:02 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

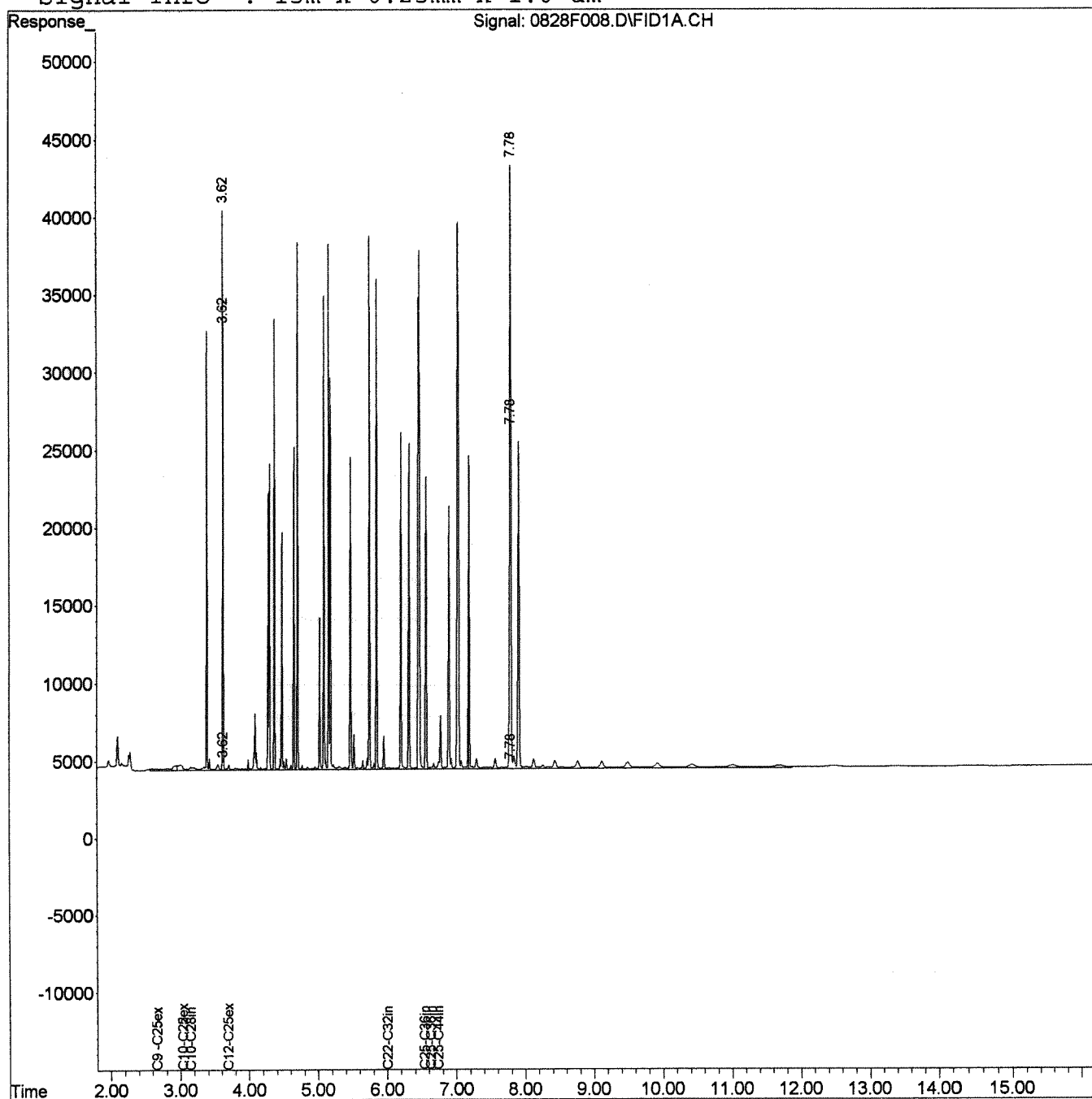
Response via : Single Level Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um



Data File : J:\GC21\DATA\082815F\0828F010.D Vial: 91
 Acq On : 28 Aug 2015 10:07 am Operator: CHARVEY
 Sample : ALIPHATICS MARKER SVF01-72K Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 07:02:09 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Initial Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um

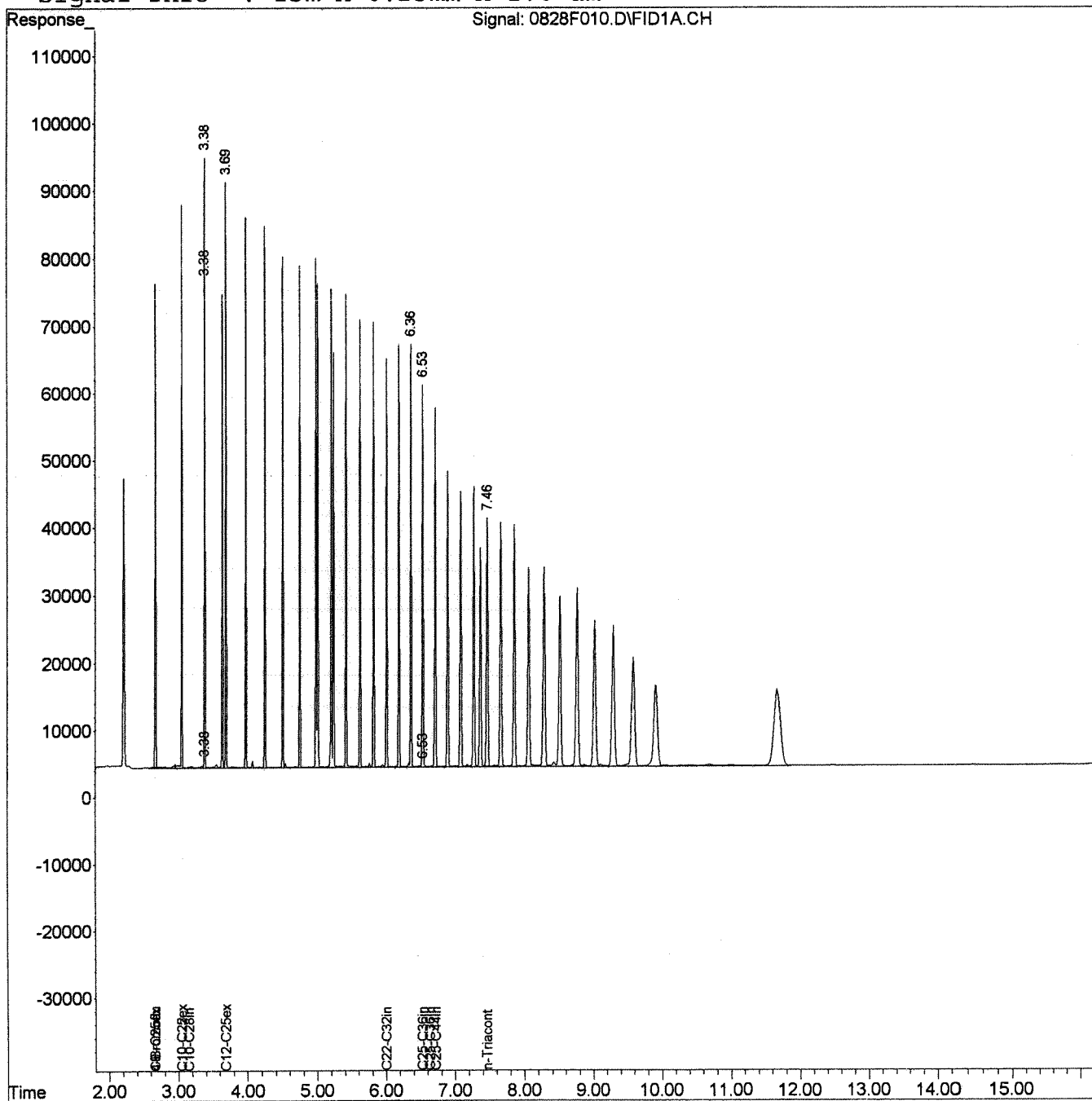
Compound	R.T.	Response	Conc	Units

System Monitoring Compounds				
1) S 4-Bromofluorobenzene	2.67f	54961	66.531	ppm
Spiked Amount 50.000	Recovery	=	133.06%	
3) S n-Triacontane	7.46	52424	34.198	ppm
Spiked Amount 50.000	Recovery	=	68.40%	
Target Compounds				
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	999643	693.537	ppm
5) H C10-C22ex DRO [AZ]	3.05	829242	596.122	ppm
6) H C10-C25ex DRO [AK102]	3.05	995822	717.669	ppm
7) H C10-C28in DRO [8015]	3.15	1212270	862.715	ppm
8) H C12-C25ex DRO [NWTPH]	3.69	879420	755.620	ppm
9) H C22-C32in RRO [AZ]	6.00	592353	1524.697	ppm
10) H C25-C36in RRO [NWTPH]	6.53	653455	1047.890	ppm
11) H C25-C36in RRO [AK103]	6.63	653455	804.460	ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	947045	857.734	ppm

Data File : J:\GC21\DATA\082815F\0828F010.D Vial: 91
 Acq On : 28 Aug 2015 10:07 am Operator: CHARVEY
 Sample : ALIPHATICS MARKER SVF01-72K Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 7:02 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Single Level Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um



Exception Report

Data File: J:\GC21\DATA\082815F\0828F012.D
Lab ID: KWG1508220-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/28/2015 10:29
Date Quantitated: 08/29/2015 07:10
Batch ID: KWG1508220
Analysis Method: NWTPH-Dx
MethodJoinID: MJ1081

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review:

Secondary Review:

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F012.D	Instrument:	GC21
Acqu Date:	08/28/2015 10:29	Quant Date:	08/29/2015 07:10
Run Type:	CCV	Vial:	96
Lab ID:	KWG1508220-1	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	NWTPH-Dx	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1081
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.37		83852	48.36		50-150 NA	
n-Triacontane	7.46		71149	46.41		50-150 NA	

Target Compounds

Final Conc. Units:							
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		1188856	1,021			
Residual Range Organics (RRO)	6.53		16399	26.30			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F012.D	Instrument:	GC21
Acqu Date:	08/28/2015 10:29	Quant Date:	08/29/2015 07:10
Run Type:	CCV	Vial:	96
Lab ID:	KWG1508220-1	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	AK102	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1506
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.37		83852	48.36		50-150 NA	

Target Compounds

			Final Conc. Units:		ug/L		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.05		1393059	1,004			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F012.D Vial: 96
 Acq On : 28 Aug 2015 10:29 am Operator: CHARVEY
 Sample : DRO 1000/50 SVF01-72P Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 07:10:29 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Initial Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc	Units

System Monitoring Compounds				
1) S 4-Bromofluorobenzene	2.70	38319	46.386	ppm
Spiked Amount 50.000		Recovery =	92.77%	
2) S o-Terphenyl	5.37	83852	48.358	ppm
Spiked Amount 50.000		Recovery =	96.72%	
3) S n-Triacontane	7.46	71149	46.414	ppm
Spiked Amount 50.000		Recovery =	92.83%	
Target Compounds				
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	1447031	1003.928	ppm
5) H C10-C22ex DRO [AZ]	3.05	1342351	964.983	ppm
6) H C10-C25ex DRO [AK102]	3.05	1393059	1003.949	ppm
7) H C10-C28in DRO [8015]	3.15	1402050	997.773	ppm
8) H C12-C25ex DRO [NWTPH]	3.69	1188856	1021.495	ppm
9) H C22-C32in RRO [AZ]	6.00	61776	159.009	ppm
10) H C25-C36in RRO [NWTPH]	6.53	16399	26.298	ppm
11) H C25-C36in RRO [AK103]	6.63	16399	20.189	ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	28964	26.233	ppm

Data File : J:\GC21\DATA\082815F\0828F012.D

Vial: 96

Acq On : 28 Aug 2015 10:29 am

Operator: CHARVEY

Sample : DRO 1000/50 SVF01-72P

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

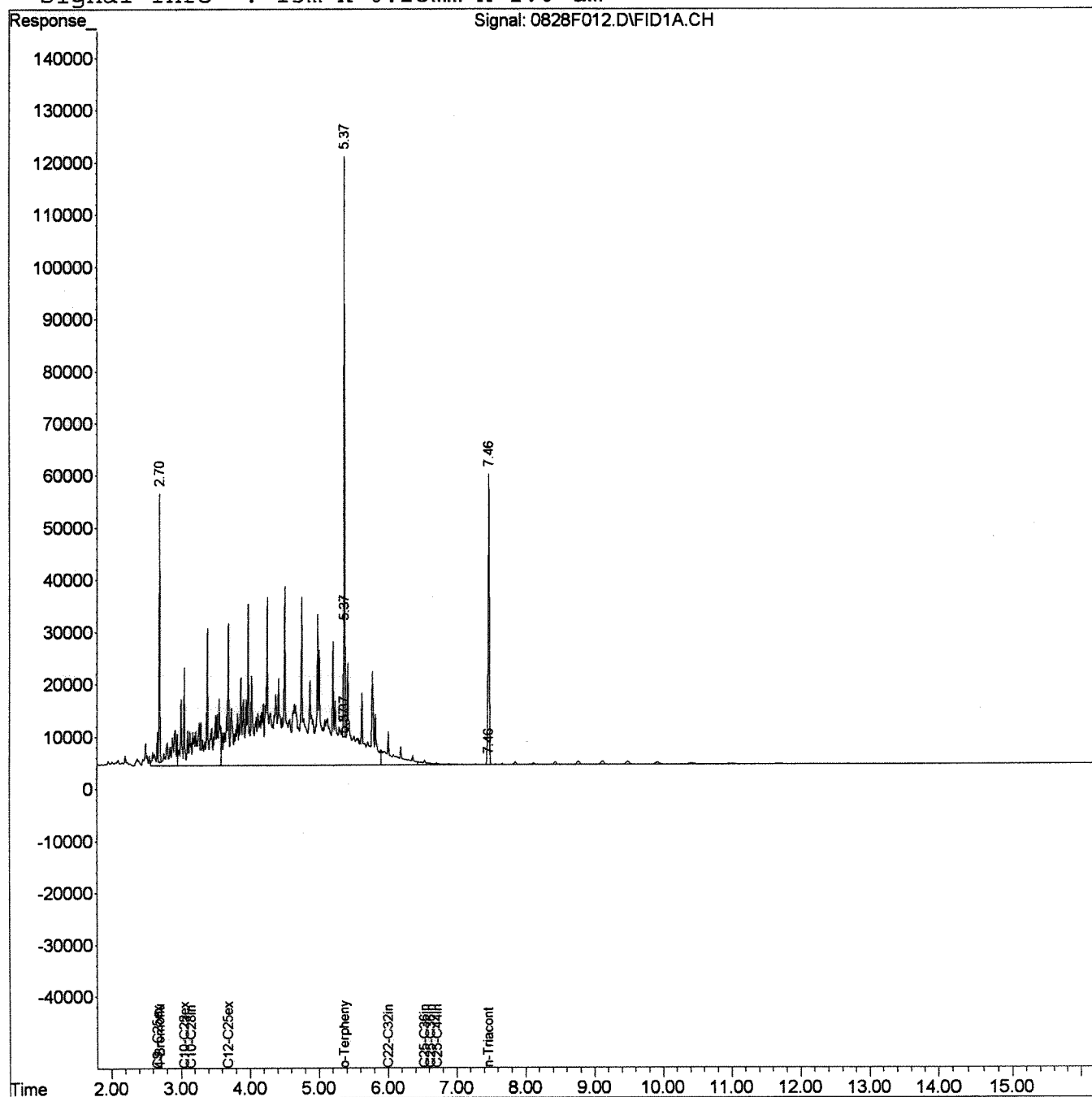
Response via : Single Level Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um



Exception Report

Data File: J:\GC21\DATA\082815F\0828F014.D
Lab ID: KWG1508220-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/28/2015 10:52
Date Quantitated: 08/29/2015 07:12
Batch ID: KWG1508220
Analysis Method: NWTPH-Dx
MethodJoinID: MJ1081

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: CH 8/29/15

Secondary Review: AD 8/29/15

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F014.D	Instrument:	GC21
Acqu Date:	08/28/2015 10:52	Quant Date:	08/29/2015 07:12
Run Type:	CCV	Vial:	97
Lab ID:	KWG1508220-1	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	NWTPH-Dx	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1081
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl			0			50-150 NA	NR
n-Triacontane	7.47		343	0.2240		50-150 NA	NR

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		50247	43.17			NR
Residual Range Organics (RRO)	6.53		638800	1,024			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F014.D	Instrument:	GC21
Acqu Date:	08/28/2015 10:52	Quant Date:	08/29/2015 07:12
Run Type:	CCV	Vial:	97
Lab ID:	KWG1508220-1	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	AK102	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1506
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl			0			50-150 NA	NR

Target Compounds

			Final Conc. Units:		ug/L		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.05		57138	41.18			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F014.D Vial: 97
 Acq On : 28 Aug 2015 10:52 am Operator: CHARVEY
 Sample : RRO 1000 SVF01-72A Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 07:10:30 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Initial Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
3) S n-Triacontane	7.47	343	0.224 ppm
Spiked Amount 50.000	Recovery	=	0.45%
Target Compounds			
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	60938	42.278 ppm
5) H C10-C22ex DRO [AZ]	3.05	25679	18.460 ppm
6) H C10-C25ex DRO [AK102]	3.05	57138	41.178 ppm
7) H C10-C28in DRO [8015]	3.15	199435	141.928 ppm
8) H C12-C25ex DRO [NWTPH]	3.69	50247	43.173 ppm
9) H C22-C32in RRO [AZ]	6.00	391707	1008.241 ppm
10) H C25-C36in RRO [NWTPH]	6.53	638800	1024.389 ppm
11) H C25-C36in RRO [AK103]	6.63	640641	788.685 ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	1142961	1035.175 ppm

Data File : J:\GC21\DATA\082815F\0828F014.D

Vial: 97

Acq On : 28 Aug 2015 10:52 am

Operator: CHARVEY

Sample : RRO 1000 SVF01-72A

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 7:12 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

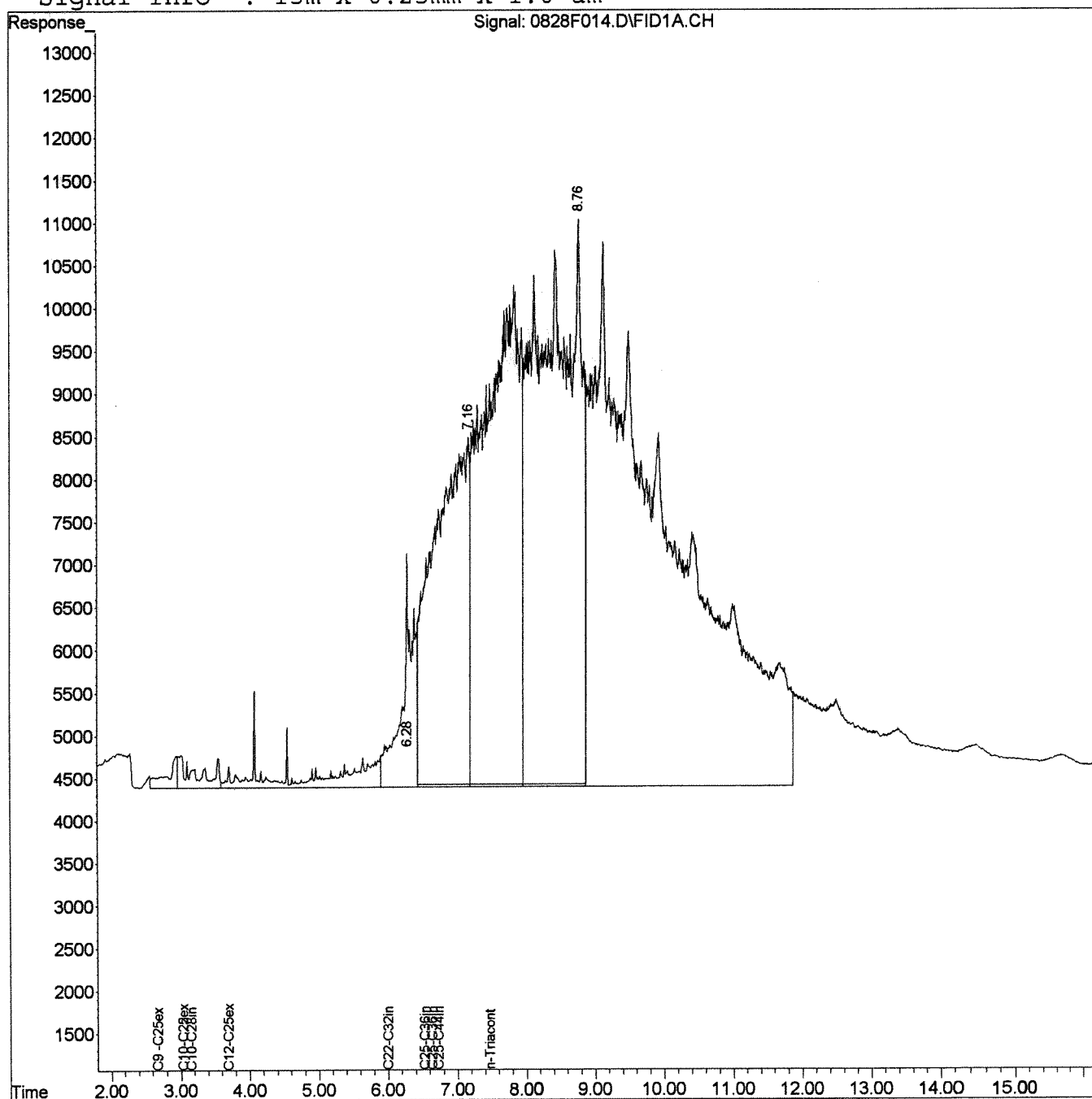
Response via : Single Level Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um



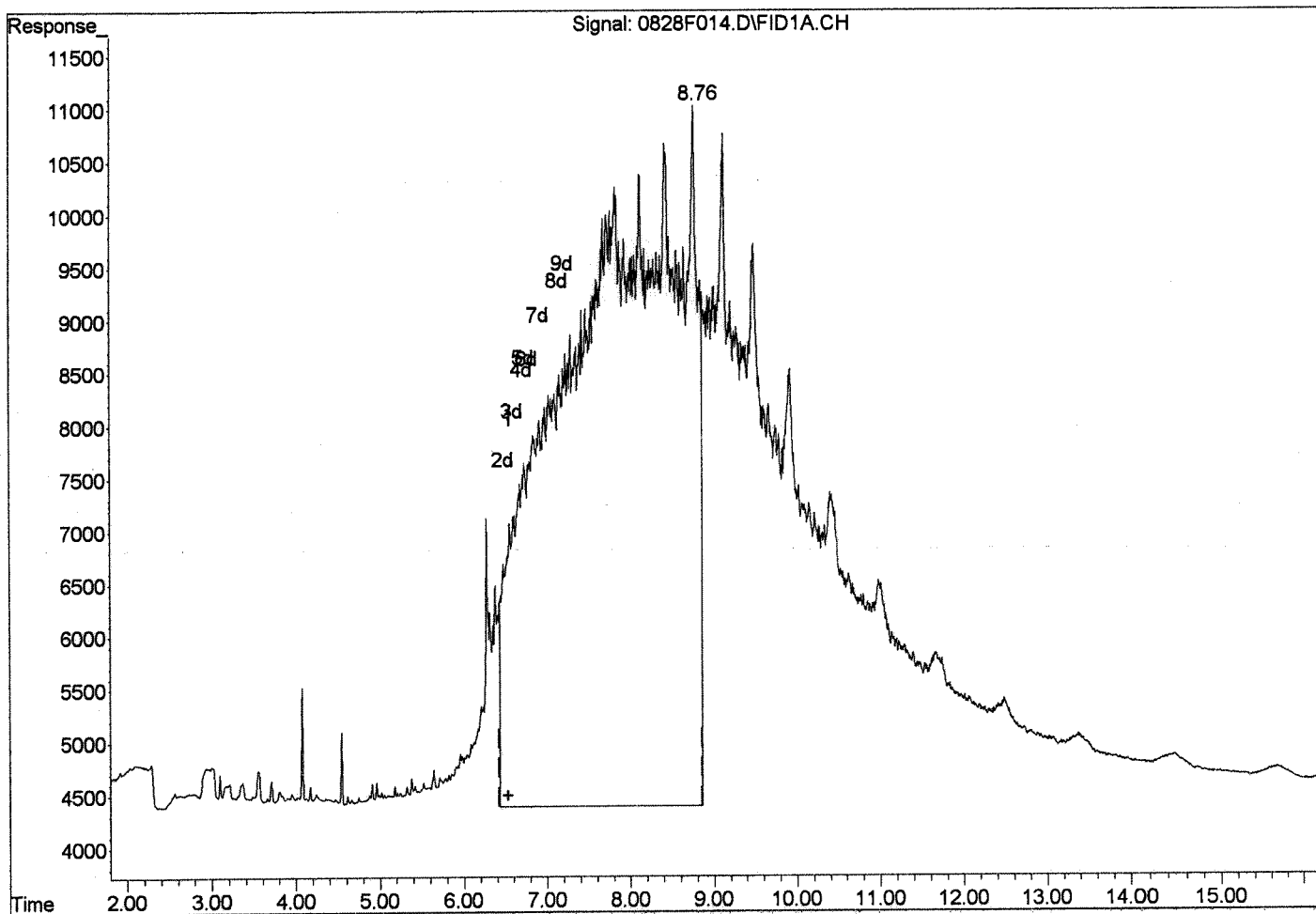
Quantitation Report (Quant)

Data File : J:\GC21\DATA\082815F\0828F014.D
 Acq On : 28 Aug 2015 10:52 am
 Sample : RRO 1000 SVF01-72A
 Misc :
 IntFile : rteint.p
 Quant Time: Aug 29 7:10 2015

Vial: 97
 Operator: CHARVEY
 Inst : GC21
 Multiplr: 1.00

Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Multiple Level Calibration



Signal: 0828F014.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.53min 1027.341ppm

response 640641

Manual Integration:

Before

08/29/15

CH

(+) = Expected Retention Time

0828F014.D 042315F.M

Sat Aug 29 07:12:06 2015

Data File : J:\GC21\DATA\082815F\0828F014.D

Vial: 97

Acq On : 28 Aug 2015 10:52 am

Operator: CHARVEY

Sample : RRO 1000 SVF01-72A

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

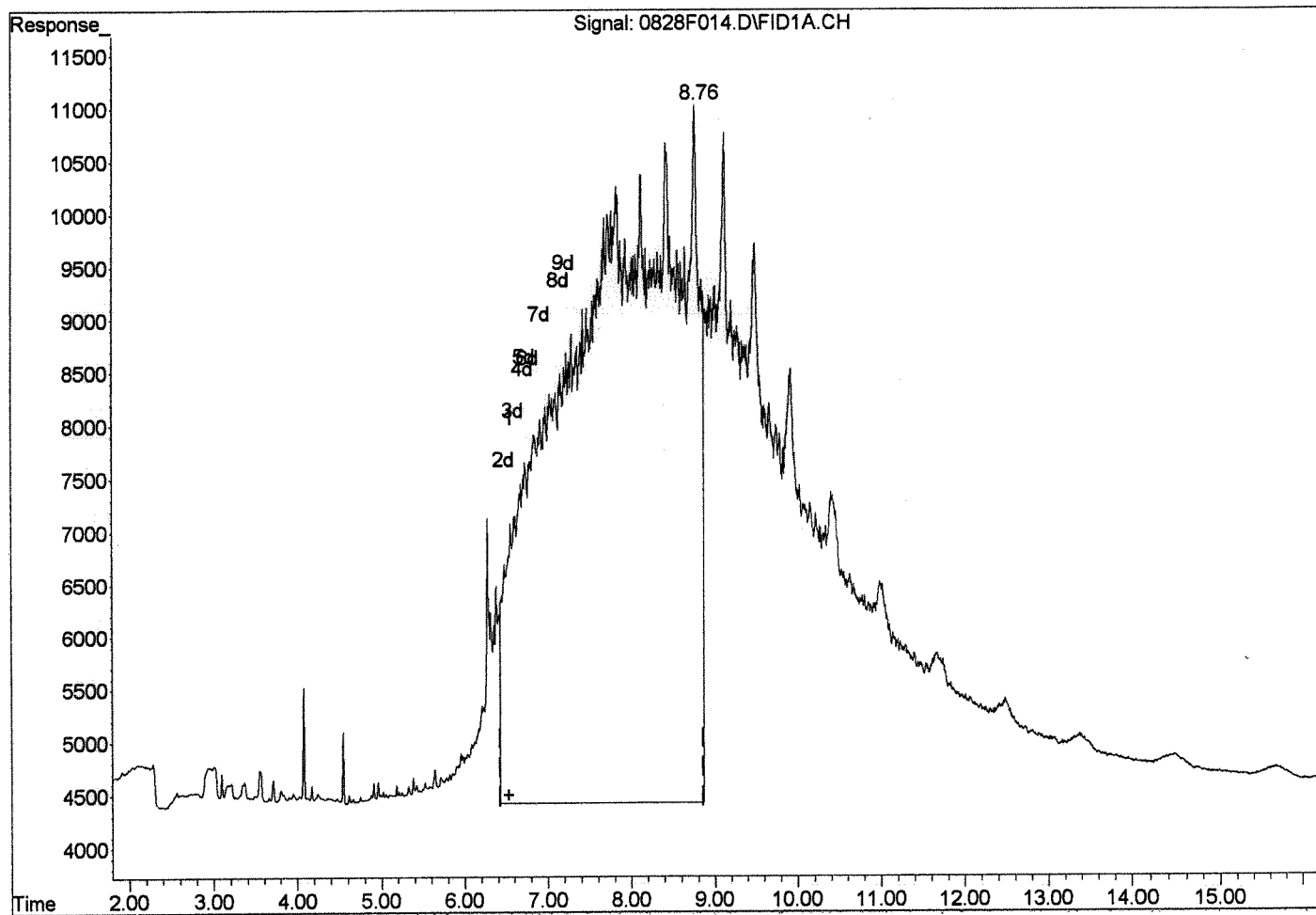
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F014.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.53min 1024.389ppm

response 638800

Manual Integration:

After

Baseline/Shoulder

08/29/15

Handwritten signatures

(+) = Expected Retention Time

0828F014.D 042315F.M

Sat Aug 29 07:12:19 2015

Exception Report

Data File: J:\GC21\DATA\082815F\0828F016.D
Lab ID: KWG1508220-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/28/2015 11:15
Date Quantitated: 08/29/2015 07:10
Batch ID: KWG1508220
Analysis Method: NWTPH-Dx
MethodJoinID: MJ1081

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review:

Secondary Review:

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F016.D	Instrument:	GC21
Acqu Date:	08/28/2015 11:15	Quant Date:	08/29/2015 07:10
Run Type:	IB	Vial:	87
Lab ID:	KWG1508220-5	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	NWTPH-Dx	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1081
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl			0			50-150 NA	
n-Triacontane			0			50-150 NA	

Target Compounds

			Final Conc. Units:				
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		13780	11.84			
Residual Range Organics (RRO)	6.53		12920	20.72			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File: J:\GC21\DATA\082815F\0828F016.D Acqu Date: 08/28/2015 11:15 Run Type: IB Lab ID: KWG1508220-5	Quant Date: 08/29/2015 07:10	Instrument: GC21 Vial: 87 Dilution: 1.0 Soln Conc. Units: ppm
Bottle ID: Prod Code: NWTPH-DX NW_TPH	Tier: Collect Date:	Matrix: NOT APPLICABLE Receive Date: 08/29/2015
Analysis Lot: KWG1508220 Analysis Method: AK102 Prep Ref:	Prep Lot: Prep Method: Prep Date:	Report Group:
Quant Method: J:\GC21\METHODS\042315F.M Title: MB Ref:	Calibration ID: CAL13980 Method ID: MJ1506 Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl			0			50-150 NA	

Target Compounds

			Final Conc. Units:		ug/L		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.05		20913	15.07			

U: Undetected at or above MDL
 J: Analyte detected above MDL, but below MRL
 B: Hit above MRL also found in Method Blank
 E: Analyte concentration above high point of ICAL
 N: Presumptive evidence of compound

D: Result from dilution
 m: Manual integration performed
 d: Compound manually deleted
 NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
 #: Acceptance criteria not applicable
 ?: Insufficient information to determine acceptance
 e: Result >= MRL, but MRL less than low point of ICAL
 c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F016.D Vial: 87
Acq On : 28 Aug 2015 11:15 am Operator: CHARVEY
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 29 07:10:30 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
Last Update : Fri Aug 28 11:06:15 2015
Response via : Initial Calibration
DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc	Units
----------	------	----------	------	-------

System Monitoring Compounds

Target Compounds

4)	H	C9 -C25ex DRO [TPH-Diesel]	2.67	26107	18.113	ppm
5)	H	C10-C22ex DRO [AZ]	3.05	18714	13.453	ppm
6)	H	C10-C25ex DRO [AK102]	3.05	20913	15.072	ppm
7)	H	C10-C28in DRO [8015]	3.15	24285	17.282	ppm
8)	H	C12-C25ex DRO [NWTPH]	3.69	13780	11.840	ppm
9)	H	C22-C32in RRO [AZ]	6.00	9465	24.363	ppm
10)	H	C25-C36in RRO [NWTPH]	6.53	12920	20.719	ppm
11)	H	C25-C36in RRO [AK103]	6.63	12920	15.906	ppm
12)	H	C25-C44in RRO [TPH-Oil]	6.73	33063	29.945	ppm

Data File : J:\GC21\DATA\082815F\0828F016.D

Vial: 87

Acq On : 28 Aug 2015 11:15 am

Operator: CHARVEY

Sample : IB

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

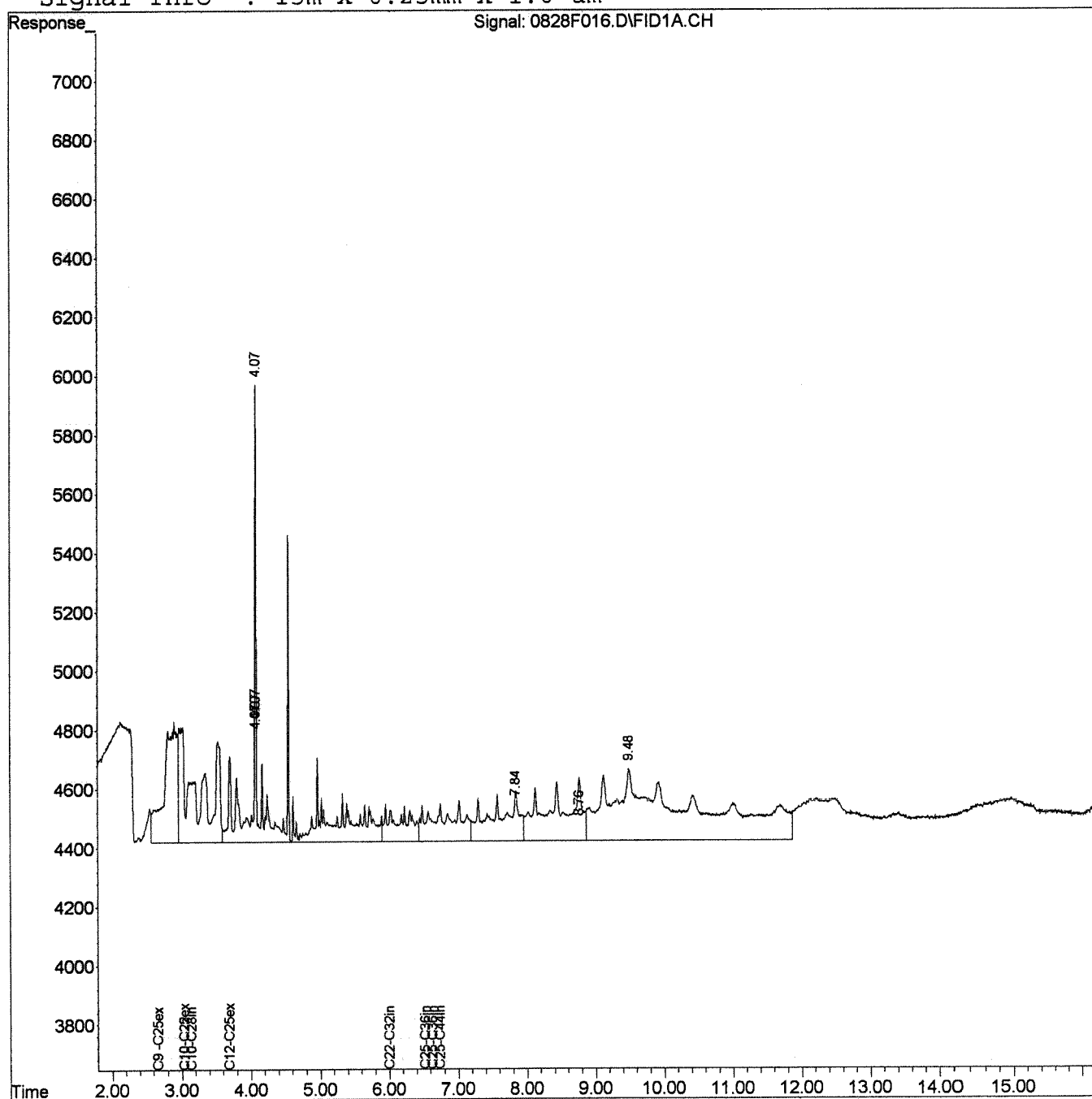
Response via : Single Level Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um



Exception Report

Data File: J:\GC21\DATA\082815F\0828F046.D
Lab ID: KWG1508220-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/28/2015 16:46
Date Quantitated: 08/29/2015 07:36
Batch ID: KWG1508220
Analysis Method: NWTPH-Dx
MethodJoinID: MJ1081

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review:

Secondary Review:

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F046.D	Instrument:	GC21
Acqu Date:	08/28/2015 16:46	Quant Date:	08/29/2015 07:36
Run Type:	CCV	Vial:	97
Lab ID:	KWG1508220-2	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	NWTPH-Dx	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1081
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl			0			50-150 NA	NR
n-Triacontane	7.47		214	0.1400		50-150 NA	NR

Target Compounds

Final Conc. Units:							
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		48103	41.33			NR
Residual Range Organics (RRO)	6.53		667706	1,071			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F046.D	Instrument:	GC21
Acqu Date:	08/28/2015 16:46	Quant Date:	08/29/2015 07:36
Run Type:	CCV	Vial:	97
Lab ID:	KWG1508220-2	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	AK102	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1506
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl			0			50-150 NA	NR

Target Compounds

			Final Conc. Units:		ug/L		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.05		54177	39.04			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F046.D Vial: 97
Acq On : 28 Aug 2015 4:46 pm Operator: CHARVEY
Sample : RRO 1000 SVF01-72A Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 29 07:10:42 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
Last Update : Fri Aug 28 11:06:15 2015
Response via : Initial Calibration
DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc	Units

System Monitoring Compounds				
3) S n-Triacontane	7.47	214	0.140	ppm
Spiked Amount 50.000		Recovery =	0.28%	
Target Compounds				
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	57234	39.708	ppm
5) H C10-C22ex DRO [AZ]	3.05	21380	15.370	ppm
6) H C10-C25ex DRO [AK102]	3.05	54177	39.044	ppm
7) H C10-C28in DRO [8015]	3.15	205061	145.932	ppm
8) H C12-C25ex DRO [NWTPH]	3.69	48103	41.331	ppm
9) H C22-C32in RRO [AZ]	6.00	413956	1065.509	ppm
10) H C25-C36in RRO [NWTPH]	6.53	667706	1070.743	ppm✓
11) H C25-C36in RRO [AK103]	6.63	668992	823.587	ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	1179683	1068.434	ppm

Data File : J:\GC21\DATA\082815F\0828F046.D

Vial: 97

Acq On : 28 Aug 2015 4:46 pm

Operator: CHARVEY

Sample : RRO 1000 SVF01-72A

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 7:36 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

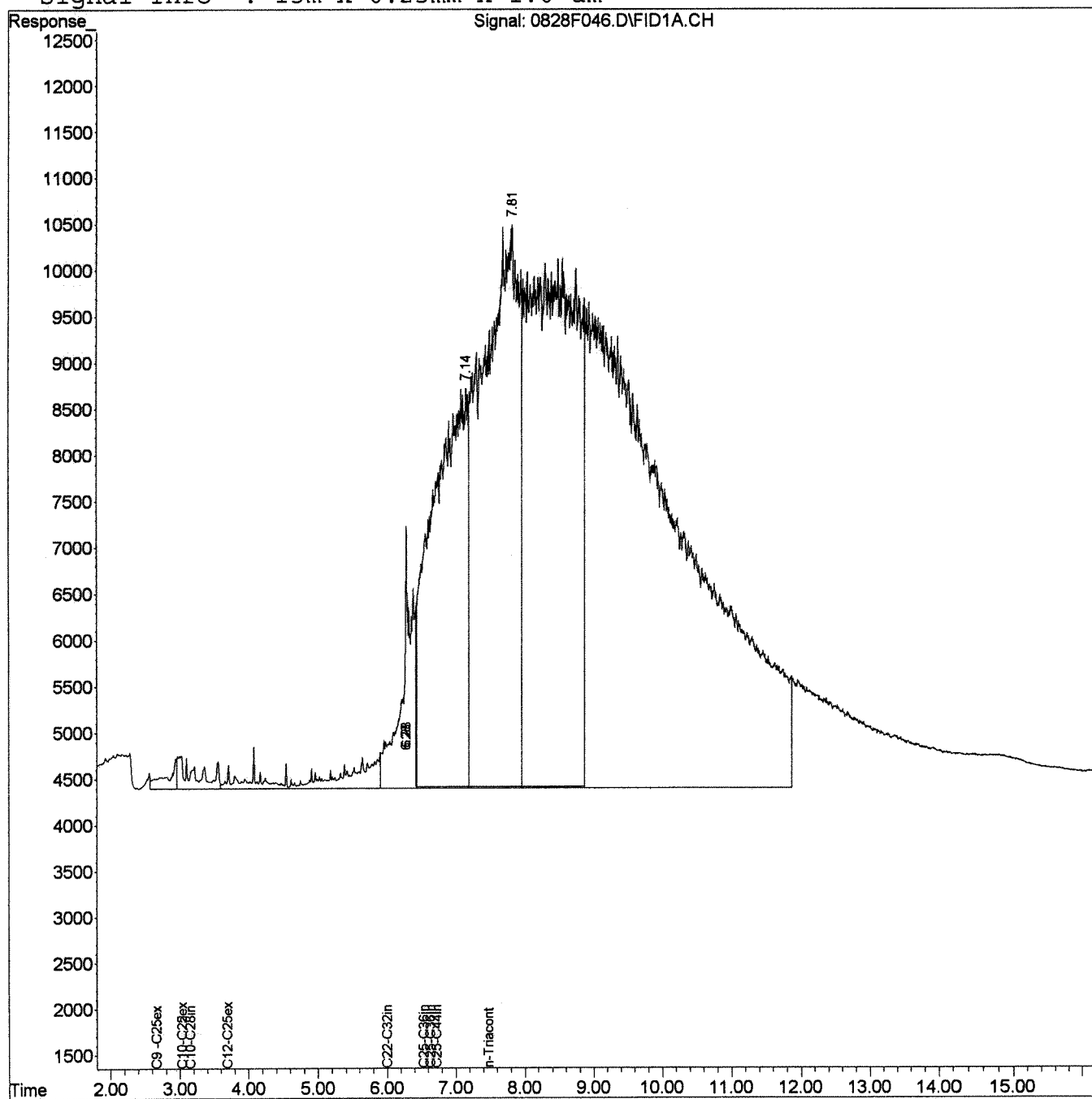
Response via : Single Level Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F046.D

Acq On : 28 Aug 2015 4:46 pm

Sample : RRO 1000 SVF01-72A

Misc :

IntFile : rteint.p

Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Vial: 97

Operator: CHARVEY

Inst : GC21

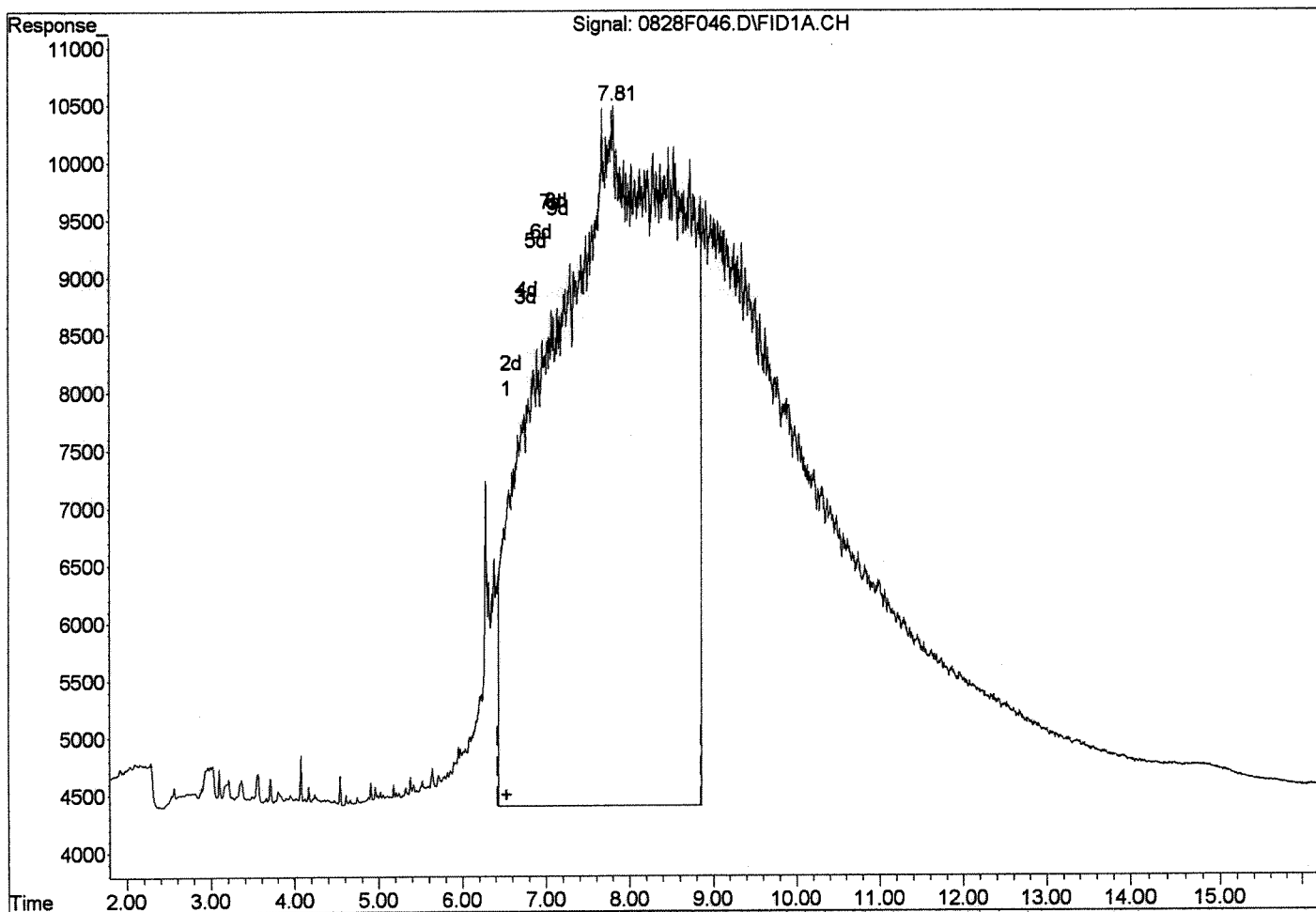
Multiplr: 1.00

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



Signal: 0828F046.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.53min 1072.805ppm

response 668992

Manual Integration:

Before

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time

0828F046.D 042315F.M

Sat Aug 29 07:36:21 2015

Quantitation Report (Qedit)

Data File : J:\GC21\DATA\082815F\0828F046.D

Vial: 97

Acq On : 28 Aug 2015 4:46 pm

Operator: CHARVEY

Sample : RRO 1000 SVF01-72A

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

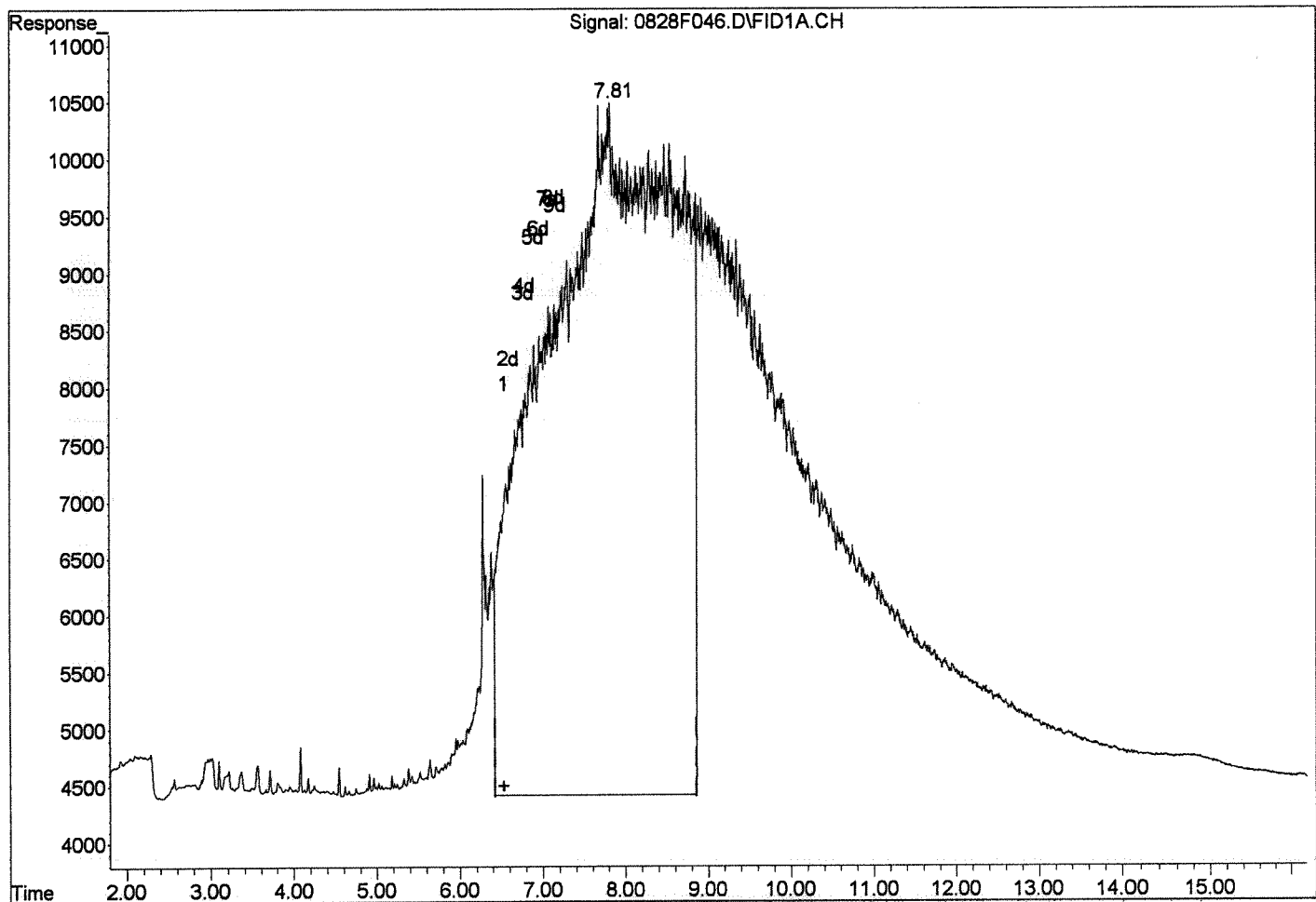
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

Response via : Multiple Level Calibration



(10) C25-C36in RRO [NWTPH] (H)

6.53min 1070.743ppm

response 667706

Manual Integration:

After

Baseline/Shoulder

08/29/15

[Handwritten signatures]

(+) = Expected Retention Time

0828F046.D 042315F.M

Sat Aug 29 07:36:37 2015

Exception Report

Data File: J:\GC21\DATA\082815F\0828F048.D
Lab ID: KWG1508220-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 08/28/2015 17:08
Date Quantitated: 08/29/2015 07:10
Batch ID: KWG1508220
Analysis Method: NWTPH-Dx
MethodJoinID: MJ1081

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review:

Secondary Review:

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F048.D	Instrument:	GC21
Acqu Date:	08/28/2015 17:08	Quant Date:	08/29/2015 07:10
Run Type:	CCV	Vial:	96
Lab ID:	KWG1508220-2	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	NWTPH-Dx	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1081
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.36		89307	51.50		50-150 NA	
n-Triacontane	7.46		76110	49.65		50-150 NA	

Target Compounds

Final Conc. Units:							
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		1257648	1,081			
Residual Range Organics (RRO)	6.53		13767	22.08			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F048.D	Instrument:	GC21
Acqu Date:	08/28/2015 17:08	Quant Date:	08/29/2015 07:10
Run Type:	CCV	Vial:	96
Lab ID:	KWG1508220-2	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	AK102	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1506
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.36		89307	51.50		50-150 NA	

Target Compounds

			Final Conc. Units:		ug/L		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.05		1472637	1,061			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F048.D Vial: 96
 Acq On : 28 Aug 2015 5:08 pm Operator: CHARVEY
 Sample : DRO 1000/50 SVF01-72P Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 07:10:43 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Initial Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 4-Bromofluorobenzene	2.70	40171	48.627 ppm
Spiked Amount 50.000	Recovery	=	97.25%
2) S o-Terphenyl	5.36	89307	51.504 ppm
Spiked Amount 50.000	Recovery	=	103.01%
3) S n-Triacontane	7.46	76110	49.650 ppm
Spiked Amount 50.000	Recovery	=	99.30%
Target Compounds			
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	1528370	1060.359 ppm
5) H C10-C22ex DRO [AZ]	3.05	1419217	1020.240 ppm
6) H C10-C25ex DRO [AK102]	3.05	1472637	1061.300 ppm
7) H C10-C28in DRO [8015]	3.15	1482970	1055.359 ppm
8) H C12-C25ex DRO [NWTPH]	3.69	1257648	1080.603 ppm
9) H C22-C32in RRO [AZ]	6.00	64238	165.346 ppm
10) H C25-C36in RRO [NWTPH]	6.53	13767	22.077 ppm
11) H C25-C36in RRO [AK103]	6.63	13767	16.948 ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	21004	19.023 ppm

Data File : J:\GC21\DATA\082815F\0828F048.D

Vial: 96

Acq On : 28 Aug 2015 5:08 pm

Operator: CHARVEY

Sample : DRO 1000/50 SVF01-72P

Inst : GC21

Misc :

Multiplr: 1.00

IntFile : rteint.p

Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)

Title : 8015/NWTPH/AK SVF MJ257 CAL 13980

Last Update : Fri Aug 28 11:06:15 2015

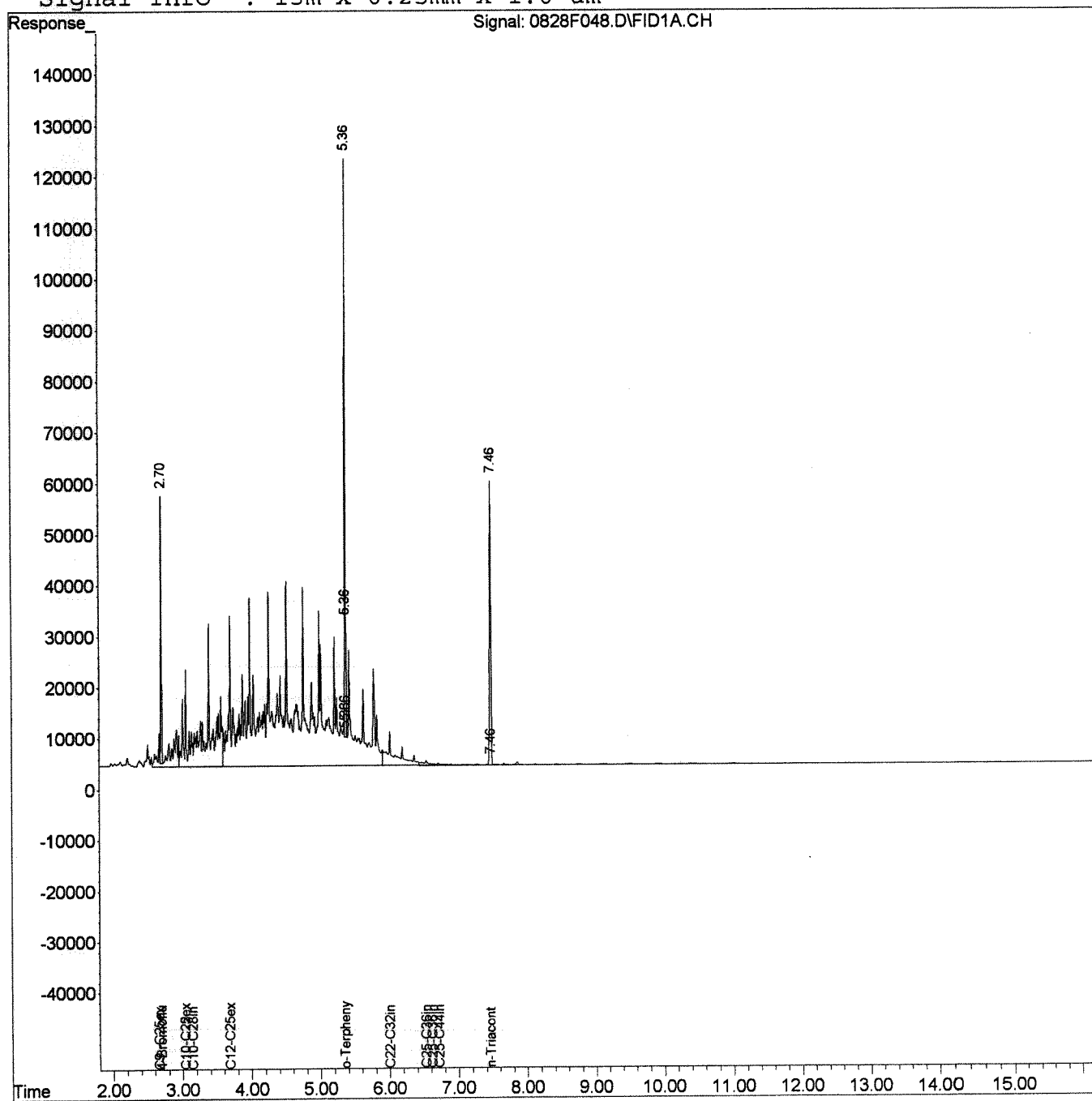
Response via : Single Level Calibration

DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL

Signal Phase : ZB-1

Signal Info : 15m x 0.25mm x 1.0 um



Exception Report

Data File: J:\GC21\DATA\082815F\0828F050.D
Lab ID: KWG1508220-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 08/28/2015 17:30
Date Quantitated: 08/29/2015 07:10
Batch ID: KWG1508220
Analysis Method: NWTPH-Dx
MethodJoinID: MJ1081

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review:

Secondary Review:

CA 8/29/15
MJ1081

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F050.D	Instrument:	GC21
Acqu Date:	08/28/2015 17:30	Quant Date:	08/29/2015 07:10
Run Type:	IB	Vial:	87
Lab ID:	KWG1508220-6	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	NWTPH-Dx	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1081
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.36		91885	52.99		50-150 NA	
n-Triacontane	7.46		81660	53.27		50-150 NA	

Target Compounds

Final Conc. Units:							
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.69		11192	9.62			
Residual Range Organics (RRO)	6.53		12007	19.26			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\GC21\DATA\082815F\0828F050.D	Instrument:	GC21
Acqu Date:	08/28/2015 17:30	Quant Date:	08/29/2015 07:10
Run Type:	IB	Vial:	87
Lab ID:	KWG1508220-6	Dilution:	1.0
		Soln Conc. Units:	ppm

Bottle ID:		Tier:		Matrix:	NOT APPLICABLE
Prod Code:	NWTPH-DX NW_TPH	Collect Date:		Receive Date:	08/29/2015

Analysis Lot:	KWG1508220	Prep Lot:		Report Group:	
Analysis Method:	AK102	Prep Method:			
Prep Ref:		Prep Date:			

Quant Method:	J:\GC21\METHODS\042315F.M	Calibration ID:	CAL13980
Title:		Method ID:	MJ1506
MB Ref:		Quant based on Method	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
o-Terphenyl	5.36		91885	52.99		50-150 NA	

Target Compounds

			Final Conc. Units:		ug/L		
Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.05		16697	12.03			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\GC21\DATA\082815F\0828F050.D Vial: 87
 Acq On : 28 Aug 2015 5:30 pm Operator: CHARVEY
 Sample : IB/SURR Inst : GC21
 Misc : Multiplr: 1.00
 IntFile : rteint.p
 Quant Time: Aug 29 07:10:44 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
 Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
 Last Update : Fri Aug 28 11:06:15 2015
 Response via : Initial Calibration
 DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
 Signal Phase : ZB-1
 Signal Info : 15m x 0.25mm x 1.0 um

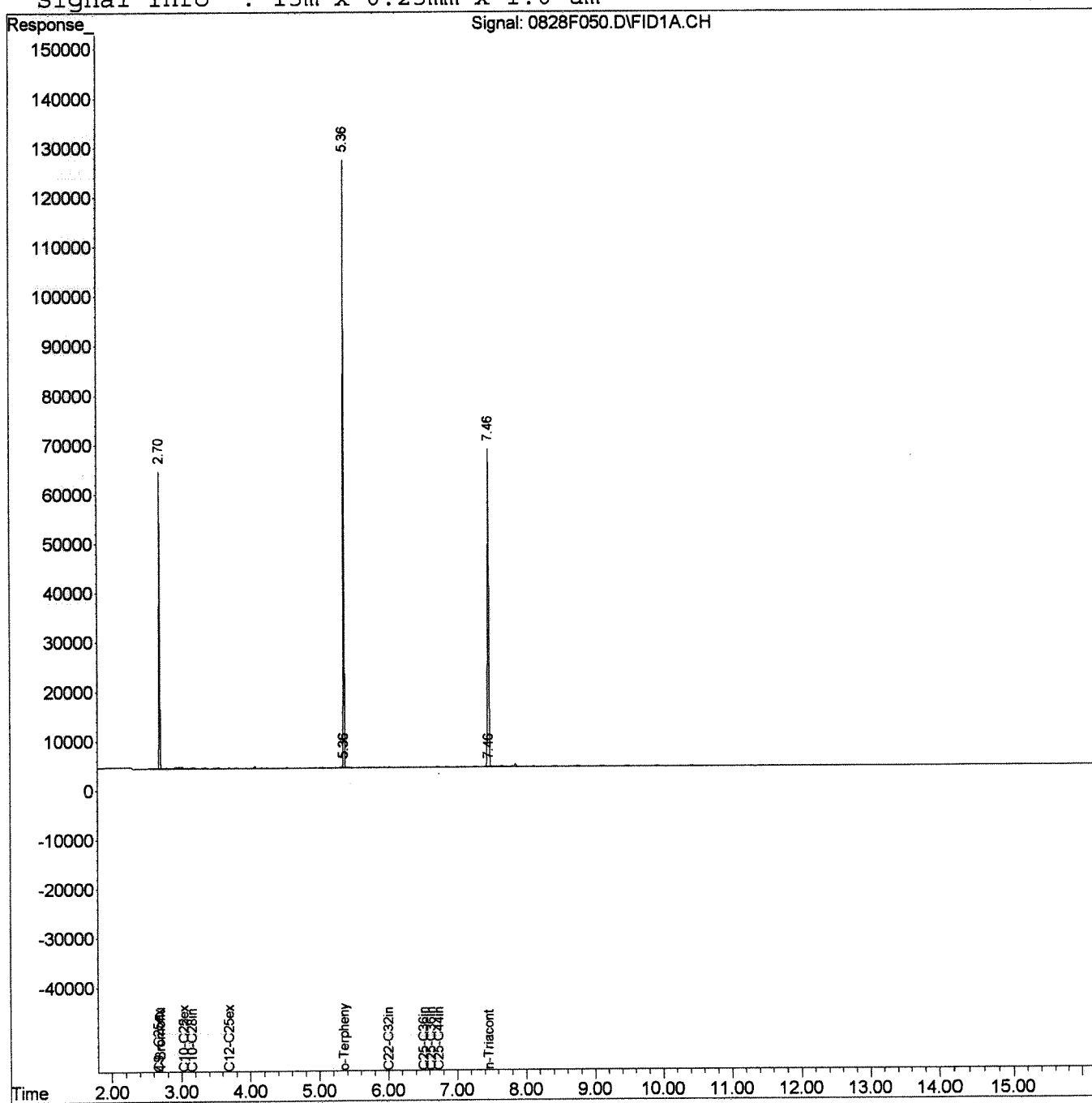
Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S 4-Bromofluorobenzene	2.70	44255	53.571 ppm
Spiked Amount 50.000	Recovery	=	107.14%
2) S o-Terphenyl	5.36	91885	52.991 ppm
Spiked Amount 50.000	Recovery	=	105.98%
3) S n-Triacontane	7.46	81660	53.270 ppm
Spiked Amount 50.000	Recovery	=	106.54%
Target Compounds			
4) H C9 -C25ex DRO [TPH-Diesel]	2.67	19872	13.787 ppm
5) H C10-C22ex DRO [AZ]	3.05	14602	10.497 ppm
6) H C10-C25ex DRO [AK102]	3.05	16697	12.033 ppm
7) H C10-C28in DRO [8015]	3.15	19939	14.190 ppm
8) H C12-C25ex DRO [NWTPH]	3.69	11192	9.616 ppm
9) H C22-C32in RRO [AZ]	6.00	10456	26.913 ppm
10) H C25-C36in RRO [NWTPH]	6.53	12007	19.255 ppm
11) H C25-C36in RRO [AK103]	6.63	12007	14.782 ppm
12) H C25-C44in RRO [TPH-Oil]	6.73	20462	18.532 ppm

Data File : J:\GC21\DATA\082815F\0828F050.D Vial: 87
Acq On : 28 Aug 2015 5:30 pm Operator: CHARVEY
Sample : IB/SURR Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 29 7:10 2015 Quant Results File: 042315F.RES

Quant Method : J:\GC21\METHODS\042315F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL 13980
Last Update : Fri Aug 28 11:06:15 2015
Response via : Single Level Calibration
DataAcq Meth : SVF_FB.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um





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September 9, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (August 31 – September 6, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from August 31 through September 6, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA). Sediment fencing was installed daily below the excavation area at an approximate elevation of 9.6 ft National Geodetic Vertical Datum of 1929 (NGVD29).

Import Material

Class 2000 rock armor, class 200 rock armor, and beach backfill were delivered to the site during the reporting period.

Excavation, Stabilization and Soil Management

Excavation of upper beach material was completed from 3+50 ft to 7+50 ft. Excavated material from 6+25 ft to 7+50 ft was hauled to the mold basement. Material from 3+50 ft to 6+25 ft was hauled to the north side of the east landfill. Excavation of the north alcove was completed from 2+50 ft to 4+00 ft, and excavated material was hauled to the north side of

the east landfill. Excavated sections were backfilled during the same day with imported beach material. The Northern Outfall (003) was temporarily plugged during excavation and backfilling activities from 6+25 ft to 7+50 ft to prevent base flow from impacting construction below the outfall.

The northernmost beach access ramp, consisting of excavated berm material and located between 2+75 ft and 3+37 ft, was removed and hauled to the north side of the east landfill. Excavation of trench toe material was completed from 2+75 ft to 3+37 ft and hauled to the north side of the east landfill. Geotextile fabric was placed over the toe and bank excavation, crushed rock was placed on the geotextile, and Class 2000 rock armor was placed on the crushed rock from 2+75 ft to 3+37 ft.

Final placement of rock armor slope to an elevation of 28.5 ft NGVD29 was completed between 2+50 ft and 4+50 ft.

Post-excavation Sampling

In accordance with the final design report, three 3-point composite samples were collected from the floor of the 3 ft north alcove excavation between stations 2+50 ft and 5+20 ft. The samples were shipped under chain-of-custody to ALS Environmental for polychlorinated biphenyl Aroclors analysis.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the toe trench and upper beach. No turbidity was observed in the river resulting from construction activities.

Cultural Resource Monitoring

Willamette Cultural Resources Associates were on-site to conduct cultural resources monitoring during excavation near the north end of the project area. No cultural resources were discovered during excavation activities. Excavation in this area is complete and no further cultural monitoring will be required for the remainder of the project.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the August 31 through September 6, 2015 reporting period. There have been no changes in the project schedule.

Riverbank SCM Progress Report August 31 through September 6, 2015
September 9, 2015
Page 3

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Heimbucher'.

Craig Heimbucher, P.E.
Project Manager

enclosures

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
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September 15, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

**Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction
Progress Report (September 7 – 13, 2015)**

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from September 7 - 13, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA). Sediment fencing was installed daily below the excavation area at an approximate elevation of 9.6 ft National Geodetic Vertical Datum of 1929 (NGVD29).

Import Material

Class 2000 rock armor, class 200 rock armor, and beach backfill were delivered to the site during the reporting period. Strider has initiated analysis on a new potential source material for topsoil. Material analysis is in process.

Excavation, Stabilization and Soil Management

Upper beach and rock armor rock armor were completed to finish grade from station 4+50 to 14+00 ft. This included placement of the top layer of beach material, placement of 1.5" minus crushed rock and placement of rock armor to an elevation of 28.5 ft NGVD29. Grading of beach backfill material was completed starting at north end of project area and working south.

A portion of the northernmost beach construction access road north of the dock, consisting of excavated berm material and located between 15+00 ft and 15+60 ft, was removed and hauled to the north side of the east landfill. Excavation of the bank and trench toe material was completed from 15+00 ft to 15+60 ft and hauled to the north side of the east landfill. Geotextile fabric was placed over the toe and bank excavation, crushed rock was placed on the geotextile, and Class 2000 rock armor was placed on the crushed rock from 15+00 to 15+60 ft.

Dock area access points were established in preparation for excavation in the vicinity of the dock. Vegetation was removed from top of bank back towards the road north of dock. Bank soil/slag material excavated during this preparation was hauled to DMMA in preparation for disposal at Riverbend Landfill. Excavated berm material was hauled to north side of east landfill. Using a mini-excavator, removal of material from under the dock was initiated, starting at the beach and moving upslope. Material around pilings was excavated by hand using shovels. Beach material was hauled to east landfill, and bank soil/slag fill was hauled to the DMMA. Beach backfill was placed under the dock from 15+60 to 16+00 ft.

Construction of a habitat connection between the upper beach and the upland riparian area above the rock armor was initiated during the reporting period. The habitat connection, consisting of crushed rock overlaying beach backfill and rock armor, is approximately located between sections 3+43 ft and 3+58 ft.

Following analytical confirmation the previously-discovered beach material with a slight petroleum-like odor was transported from the DMMA to the mold basement following confirmation that it is below laboratory reporting limits for petroleum hydrocarbons.

Post-excavation Sampling

Three subsamples (BF4-8, BF4-9, BF4-10) of a 10-point composite sample (BF4) were collected from the exposed bank face between stations 15+00 ft and 15+60 ft following removal of the construction access road and excavation of bank soil/slag fill north of the dock. Five subsamples (BF4-1 through BF4-5) for this bank face sample (BF-4) were previously collected and shipped to ALS environmental under chain of custody. Analysis

of BF-4 for polychlorinated biphenyl Aroclors and total metals is pending collection of the remaining two subsamples (BF4-6 and BF4-7) following complete removal of the north access road and bank face excavation of this area.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the toe trench and upper beach. No turbidity was observed in the river resulting from construction activities.

Cultural Resource Monitoring

No cultural resources monitoring occurred during the reporting period. Cultural resources monitoring has been completed for the project.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the September 7-13, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

enclosures

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
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September 22, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (September 14 – 20, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from September 14 - 20, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA). Sediment fencing was installed daily below the excavation area at an approximate elevation of 9.6 ft National Geodetic Vertical Datum of 1929 (NGVD29).

Import Material

Beach backfill and class 200 rock armor were delivered to the site during the reporting period. Strider has initiated analysis on a new potential source material for topsoil. Material analysis is in process.

Excavation, Stabilization and Soil Management

Portions of the construction access road north of dock were removed. Bank material was hauled to the DMMA, toe material was hauled to the mold basement, and berm material used for road construction was hauled to the east landfill, where it will be used to cap

beach material. Excavation and backfilling of the toe and bank were completed from station 14+00 ft to 14+75 ft. Excavation under the dock using a mini-excavator and hand shovels continued. Excavated material from under the dock was hauled to the DMMA for staging prior to disposal. Excavation and backfill of the beach north of dock was completed between stations 15+60 ft and 14+50 ft and excavated material was hauled to the mold basement. Excavation and backfilling was completed for the toe and bank slope north of dock between stations 14+75 ft and to 15+25 ft. Excavated toe material was hauled to the mold basement and bank material was hauled to the DMMA.

An outfall apron below Northern Outfall (003) was constructed as shown on construction drawings.

Excavation and backfilling of toe and beach south of dock was initiated beginning at the southern excavation boundary (station 19+14.9 ft) and working north. Strider began construction of the rock armor slope south of the dock as well. Excavation and backfilling of the beach was completed between stations 19+14.9 ft and 17+92 ft. Excavation and backfilling of the toe was completed between stations 19+14.9 ft and 17+76 ft. Some of the excavated material was hauled to the mold basement until the capacity of the mold basement was reached. The remainder of the excavated toe and beach material was hauled to the east landfill. The northern flank section at the southern boundary of the excavation area was constructed.

Post-excavation Sampling

Integral collected a four-point post-excavation composite beach sample (UBPE-2) between stations 14+60 ft and 15+75 ft for polychlorinated biphenyl Aroclors analysis. The sample was shipped to ALS Environmental under chain of custody. Six of 10 subsamples were collected from the excavated bank face between stations 17+50 ft and 19+14.9 ft (sample BF-5). The remaining four BF-5 subsamples will be collected between stations 15+75 ft and 17+40 ft following removal of the beach access ramp south of the dock and removal of bank face material to final excavation grade.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the toe trench and upper beach. No turbidity was observed in the river resulting from construction activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the September 14-20, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
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September 30, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

**Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction
Progress Report (September 21 – 27, 2015)**

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from September 21 - 27, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA). Sediment fencing was installed daily below the excavation area at an approximate elevation of 9.6 ft National Geodetic Vertical Datum of 1929 (NGVD29).

Import Material

Beach backfill, berm backfill, and class 50 rip rap were delivered to the site during the reporting period. Analysis of potential import topsoil material is in process.

Excavation, Stabilization and Soil Management

Portions of the construction access road south of dock, consisting of berm material, were removed and hauled to the east landfill. Bank material underneath the access ramp was excavated, starting at station 17+92 ft and working north to station 16+25 ft. Bank material was hauled to the DMMA for staging prior to disposal. Toe material was excavated

between stations 17+92 ft and 16+75 ft. Backfilling of the toe and bank with geotextile, crushed rock and class 2000 rock armor was completed between these stations. Beach material was excavated between stations 17+92 ft and 17+50 ft and backfilled with imported beach material. Excavated beach material was hauled to the east landfill. Class 2000 rock armor was placed to final grade from the Central Outfall (001) to an area slightly north of the dock.

Material from under the dock and above elevation 16.6 ft NGVD29 was excavated (by hand, using a mini-excavator, and using a vactor truck) and hauled to the DMMA for staging prior to disposal. Geotextile and crushed rock were placed in excavated areas under the dock and immediately south of the dock.

The apron under the Central Outfall (001) was constructed with class 200 rock armor. A gravel path was constructed from the berm to the Northern Outfall (003), and the area was prepared for replacement of the stormwater sampling platform.

Post-excavation Sampling

Integral collected the final four subsamples of post-excavation bank face sample BF-5 between stations 17+50 ft and 16+25 ft for polychlorinated biphenyl Aroclors and metals analysis. The sample was shipped to ALS Environmental under chain of custody.

Turbidity Monitoring


Visual turbidity monitoring of the river was completed during excavation of the toe trench and upper beach. No turbidity was observed in the river resulting from construction activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the September 21-27, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.

Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
File C1144-640



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October 7, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (September 28 – October 4, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from September 28 through October 4, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil and stockpiled soil in the disposal material management area (DMMA). Sediment fencing was installed daily below the excavation area at an approximate elevation of 9.6 ft National Geodetic Vertical Datum of 1929 (NGVD29).

Import Material

Berm backfill, beach backfill, class 200 rock armor, and class 50 rock armor were delivered to the site during the reporting period. Analysis of potential import topsoil material is in process.

Excavation, Stabilization and Soil Management

Excavation and stabilization was completed on a small section of bank between stations 21+53 ft and 22+56 ft, south of the main project area. Approximately one foot of bank soil

was excavated between elevations 18 ft and 30 ft NGVD29 and backfilled with class 50 rock armor. Excavated material was hauled to the DMMA for stockpiling.

Excavation and backfilling was completed underneath and adjacent to the north and south sides of the dock. Excavation was completed to final grade, geotextile fabric was placed on the exposed slope, and the excavation was backfilled with crushed rock and rock armor (class 50 and class 200 armor, as specified in the construction drawings).

Beach and toe material were excavated south of the dock. Excavated material was hauled to the east landfill. Beach was backfilled with imported beach material and the toe was backfilled with geotextile, crushed rock and class 2000 rock armor.

Class 2000 rock armor was placed to final grade on the bank north of the dock. Bank soil stockpiled in the DMMA was hauled to Riverbend Landfill for disposal.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during excavation of the toe trench and upper beach. No turbidity was observed in the river resulting from construction activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the September 28 through October 4, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
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October 13, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (October 5 - 11, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from October 5 - 11, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil.

Import Material

Berm backfill and class 200 rock armor were delivered to the site during the reporting period. Analysis of potential import topsoil material is in process.

Excavation, Stabilization and Soil Management

Beach and toe material were excavated in the location of the former beach access road south of the dock. Excavated material was hauled to the east landfill. Beach was backfilled with imported beach material and the toe was backfilled with geotextile, crushed rock and class 2000 rock armor.

Bank soil stockpiled in the disposal material management area was hauled to Riverbend Landfill for disposal. The final load of material for disposal was hauled to the landfill on October 7, 2015.

Class 2000 rock armor was placed around outfalls and at the top of the bank north of the dock where needed.

The beach was graded along the entire project area, and large woody debris was replaced on the beach.

Monitoring stakes were installed in sections of the beach and north alcove where post-excavation confirmation sampling confirmed polychlorinated biphenyl Aroclors concentrations exceeding 100 µg/kg.

Indicator fabric was placed on top of compacted soil in the mold basement. Six inches of imported crushed rock was placed on the indicator fabric and compacted.

Turbidity Monitoring

Visual turbidity monitoring of the river was completed during work on the upper beach. No turbidity was observed in the river resulting from construction activities.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the October 5 - 11, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
File C1144-640



319 SW Washington Street
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October 21, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

**Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction
Progress Report (October 12 - 18, 2015)**

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from October 12 - 18, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company (Strider) daily to cover excavated areas of exposed soil.

Import Material

Beach backfill and topsoil were delivered to the site during the reporting period.

Excavation, Stabilization and Soil Management

Beach backfill was placed in the north alcove to final grade. Stockpiled excavated beach material was placed against the north side of the east landfill and compacted in 12-in. lifts as specified in the design report. The compacted beach soil was covered with an orange geotextile indicator fabric. The stockpiled berm material was placed over the majority of the compacted beach soil with a 12-in. cap. Approximately one-third of the compacted beach soil remains to be capped.

Woody Debris Pile

S & H Landscape Supply was on-site to chip the woody debris stockpile in the Material Processing area.

Surveying

The final beach and bank backfill survey was completed.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the October 12 - 18, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
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October 27, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

**Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction
Progress Report (October 19 - 25, 2015)**

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from October 19 - 25, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company daily to cover excavated areas of exposed soil, and exposed imported topsoil.

Import Material

Berm backfill and topsoil were delivered to the site during the reporting period.

Construction Activities

Construction on the north side of the east landfill was completed. A 1-ft layer of imported berm backfill was used to cover the remainder of the underlying compacted beach soil and indicator fabric. The imported berm backfill was used as cover after all of the excavated berm material had been used for cover the previous week.

Placement of class 200 rock armor was completed on the north and south sides of the dock. Imported berm backfill and imported topsoil were placed south of the dock, and south of

station 3+50 ft. The imported topsoil and berm backfill were placed and compacted in lifts. Reinforcement geotextile (Geogrid) was installed between the berm and topsoil layers every two vertical feet. The landscaping contractor began removing invasive plants by hand on the north end of the project.

Deviations from Approved Project Documents Experienced During the Reporting Period

The river side of the newly constructed berm was re-designed to include a 2 ft layer of topsoil overlaying the berm backfill material, instead of the previous design that included a 1 ft layer of topsoil. The additional foot of topsoil will improve the growing substrate for newly planted vegetation. This modification was previously discussed with DEQ and will be documented in the construction completion report.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
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November 4, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (October 26 through November 1, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from October 26 – November 1, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company daily to cover areas of exposed imported topsoil.

Import Material

Berm backfill and topsoil were delivered to the site during the reporting period.

Construction Activities

Berm construction was completed on the excavated portion of the berm. Imported topsoil and berm backfill were placed and compacted in lifts. Reinforcement geotextile (Geogrid) was installed between the berm and topsoil layers every two vertical feet. A 12-in layer of topsoil was placed on the northern section of the berm not impacted by excavation, and on top of the berm south of the dock.

Hydroseeding was completed on some of the steep riparian zones in accordance planting plan. Steep riparian zone hydroseeding was completed from the north end of the project to an area just south of Central Outfall (001), and on the area south of the dock. Hydroseeding was also completed on the beach and berm material placed and compacted on the north side of the east landfill.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the October 26 through November 1, 2015 reporting period. There have been no changes in the project schedule.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
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November 12, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (November 2 - 8, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from November 2 - 8, 2015.

Actions Completed During the Reporting Period

Erosion and Sediment Control

Plastic sheeting was maintained by Strider Construction Company daily to cover areas of exposed topsoil.

Import Material

Topsoil was delivered to the site during the reporting period.

Construction Activities

Berm construction activities included installation of jute matting on the river side of the berm and on compacted beach and berm material on the north side of the east landfill, followed by hydroseeding. Jute mat placement and hydroseeding were completed by landscaping contractor AEC.

One foot of DEQ-approved Molalla River topsoil mix (Molalla topsoil) were placed on the crest and mill side of the un-excavated berm between stations 2+53 and 8+00. The mill side

of the berm between stations 8+00 and 10+00 was amended with 5 in. of the DEQ-approved BES stormwater topsoil mix (BES topsoil) in areas disturbed by construction activities or invasive removal. The crest and mill side of the berm from station 10+00 to 11+25, and station 12+00 to 15+50 were amended with 5 in. of BES topsoil in areas disturbed by construction activities or invasive removal. Areas on the crest of the berm between the dock and the southern limit of excavation (station 16+50 to 19+25) were covered with 1 ft of the Molalla topsoil. Areas of the berm and riverbank south of the southern end of excavation (between stations 19+25 and 21+75) were amended with 5 in. of BES topsoil in areas disturbed by construction activities or invasive removal. The small area of bank removal on the southern end of the project between stations 21+75 and 22+25 has been constructed as shown on drawing D85801, with 1 ft of rock armor covered by 1.5 ft of the Molalla topsoil.

Remnants of the wood debris pile in material handling were sorted and wood was disposed of at Tualatin Valley Waste Recycling. The remaining loose debris was disposed of at Hillsboro Landfill.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the November 2 - 8, 2015 reporting period. Minor clarifications were made to the planting plan regarding the placement of topsoil, as detailed above. These clarifications were approved by DEQ on November 2, 2015.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,



Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
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November 20, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (November 9 - 15, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality (DEQ) this weekly progress report for the EOS Riverbank Source Control Measure (SCM) at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from November 9 - 15, 2015.

Actions Completed During the Reporting Period

Strider Construction Company finalized grading of north alcove beach material above Ordinary High Water, re-constructed stormwater system support structures impacted by excavation, and demobilized equipment from the site during the reporting period.

Landscaping contractor AEC completed installation of jute matting covering beach and berm soil placed on the north side of the east landfill, and planted riparian areas along the berm in accordance with the planting plan.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the November 9 - 15, 2015 reporting period.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Heimbucher', written over a horizontal line.

Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
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November 24, 2015

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (November 16 - 22, 2015)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality this weekly progress report for the EOS Riverbank Source Control Measure at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from November 16 - 22, 2015.

Actions Completed During the Reporting Period

Landscaping contractor AEC completed installation of plantings in the steep riparian areas in accordance with the planting plan.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the November 16 - 22, 2015 reporting period. No additional project activities are planned until live stake and bare root planting in December 2015.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig Heimbucher".

Craig Heimbucher, P.E.
Project Manager

Riverbank SCM Progress Report November 16 - 22, 2015
November 24, 2015
Page 2

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
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February 19, 2016

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (February 1 - 7, 2016)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality this weekly progress report for the EOS Riverbank Source Control Measure at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from February 1 - 7, 2016.

Actions Completed During the Reporting Period

Landscaping contractor AEC installed bare root plantings in the gradual riparian areas using hand tools and beach plantings of willow live stakes near the northern end of the project using a track-mounted stinger. Planting was completed in accordance with the planting plan.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the February 1 - 7, 2016 reporting period.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig Heimbucher".

Craig Heimbucher, P.E.

Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
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February 19, 2016

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (February 8 - 14, 2016)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality this weekly progress report for the EOS Riverbank Source Control Measure at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from February 8 - 14, 2016.

Actions Completed During the Reporting Period

Landscaping contractor AEC installed bare root plantings in the gradual riparian areas using hand tools- and beach plantings of willow live stakes north and south of dock using a track-mounted stinger. Planting was completed in accordance with the planting plan.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the February 8 - 14, 2016 reporting period.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig Heimbucher".

Craig Heimbucher, P.E.
Project Manager

Riverbank SCM Progress Report February 8 - 14, 2016
February 19, 2016
Page 2

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
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February 25, 2016

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (February 15 - 21, 2016)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality this weekly progress report for the EOS Riverbank Source Control Measure at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from February 15 - 21, 2016.

Actions Completed During the Reporting Period

Landscaping contractor AEC finished installing bare root plantings in the gradual riparian areas in accordance with the planting plan.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the February 15 - 21, 2016 reporting period.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig Heimbucher".

Craig Heimbucher, P.E.
Project Manager

Riverbank SCM Progress Report February 15 - 21, 2016
February 25, 2016
Page 2

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
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March 3, 2016

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (February 22 - 28, 2016)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality this weekly progress report for the EOS Riverbank Source Control Measure at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from February 22 - 28, 2016.

Actions Completed During the Reporting Period

Landscaping contractor AEC installed upper beach plantings of willow and dogwood live stakes and cottonwood poles between the dock and the Northern Outfall (003) using a track-mounted stinger. Planting was conducted in accordance with the planting plan.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the February 22 - 28, 2016 reporting period.

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,

A handwritten signature in black ink, appearing to read "Craig Heimbucher".

Craig Heimbucher, P.E.
Project Manager

Riverbank SCM Progress Report February 22 - 28, 2016
March 3, 2016
Page 2

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
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March 9, 2016

Ms. Jennifer Sutter
Voluntary Cleanup and Portland Harbor Section
Oregon Department of Environmental Quality
700 NE Multnomah St.
Suite 600
Portland, OR 97232

Subject: EVRAZ Oregon Steel Riverbank Source Control Measure Weekly Construction Progress Report (February 29 through March 6, 2016)

Dear Jennifer:

On behalf of EVRAZ Oregon Steel (EOS), Integral Consulting and CRETE Consulting submit to the Oregon Department of Environmental Quality this weekly progress report for the EOS Riverbank Source Control Measure at its Rivergate facility located at 14400 N. Rivergate Blvd in Portland, Oregon. This report documents and discusses the project activities from February 29 through March 6, 2016.

Actions Completed During the Reporting Period

Landscaping contractor AEC completed installation of willow and dogwood live stakes and cottonwood poles on the upper beach and north alcove using a track-mounted stinger. Planting was conducted in accordance with the planting plan. Steel stakes used to identify long-term monitoring plots were installed on the berm and upper beach.

Minor berm erosion was repaired near the Central (001) stormwater pump station by removing jute matting on the berm, placing imported topsoil in the erosion area, and replacing the jute matting. A stormwater catch basin was installed in this same area between the berm and the Central (001) pump station to re-direct stormwater runoff to the stormwater wet well.

Deviations from Approved Project Documents Experienced During the Reporting Period

No significant deviations from approved project documents occurred during the February 29 through March 6, 2016 reporting period.

Riverbank SCM Progress Report February 29 through March 6, 2016
March 9, 2016
Page 2

If you have any questions regarding this report, please contact me at (503) 943-3629 or Mike Byers at (206) 491-7554.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Heimbucher', written over a horizontal line.

Craig Heimbucher, P.E.
Project Manager

Cc: Drew Gilpin, Debbie Deetz Silva – EOS
Mike Byers, Jamie Stevens - CRETE Consulting
Linda Baker, Jane Sund – Integral Consulting
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